

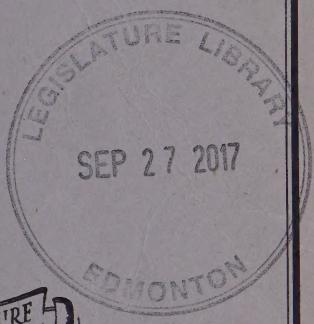
✓  
CA2 ALA  
A56  
1950

PROVINCIAL  
ALBERTA LEGISLATURE LIBRARY  
  
3 3398 00437 4665

ANNUAL REPORT  
OF THE  
**DEPARTMENT OF AGRICULTURE**  
OF THE  
**PROVINCE OF ALBERTA**

FOR THE YEAR

1950



PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

EDMONTON  
PRINTED BY A. SHNITKA, KING'S PRINTER FOR ALBERTA  
1951



Digitized by the Internet Archive  
in 2022 with funding from  
Legislative Assembly of Alberta - Alberta Legislature Library

ANNUAL REPORT  
OF THE  
**DEPARTMENT OF AGRICULTURE**  
OF THE  
**PROVINCE OF ALBERTA**  
FOR THE YEAR  
**1950**



PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

---

EDMONTON  
PRINTED BY A. SHNITKA, KING'S PRINTER FOR ALBERTA  
1951

## TABLE OF CONTENTS

	Page
Report of the Deputy Minister .....	6
Report of the Field Crops Branch .....	7
Report of the Live Stock Branch .....	39
Report of the Dairy Branch .....	53
Report of the Poultry Branch .....	73
Report of the Agricultural Extension Service .....	80
Report of the Veterinary Services Branch .....	102
Report of Fur Farms Branch .....	121
Report of Apiculture Branch .....	126
Report of Schools of Agriculture Branch .....	130
Report of School of Agriculture and Home Economics, Olds.....	133
Report of School of Agriculture and Home Economics, Vermilion.....	137
Report of Junior Activities and Youth Training.....	142
Report of Provincial Horticultural Station, Brooks.....	150
Report of Relief Settlement Branch .....	152
Report of the Surplus Wheat Board Money Trust.....	153

DEPARTMENT OF AGRICULTURE  
1950

HON. D. A. URE, *Minister of Agriculture*

MR. O. S. LONGMAN, *Deputy Minister of Agriculture*

*Heads of Branches*

- A. M. Wilson, Field Crops Commissioner.
- W. H. T. Mead, Live Stock Commissioner.
- D. H. McCallum, Dairy Commissioner.
- F. J. Higginson, Acting Poultry Commissioner.
- W. G. le Maistre, Provincial Apiarist.
- D. R. Fraser, Fur Farms Supervisor.
- F. H. Newcombe, Director Extension Service.
- E. E. Ballantyne, V.S., Director Veterinary Services.
- R. M. Putman, Superintendent, Schools of Agriculture and Assistant Deputy Minister.
- N. N. Bentley, Principal, Vermilion School of Agriculture.
- C. E. Yauch, Principal, Olds School of Agriculture.
- G. S. Black, Supervisor, Junior Activities.
- P. D. Hargrave, Superintendent, Horticultural Station.
- E. B. Swindlehurst, Acting Supervisor, Relief Settlement.



To His Honour,  
J. J. BOWLEN,  
Lieutenant-Governor of the Province of Alberta.

Sir:

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1950.

I have the honour to be, Sir,

Your obedient servant,

D. A. URE,  
Minister of Agriculture.

## REPORT OF THE DEPUTY MINISTER

(O. S. Longman)

The Honourable D. A. Ure,  
Minister of Agriculture.

Sir:

I have the honour to submit herewith the forty-fourth Annual Report of the Department of Agriculture for the year ended December 31, 1950. The report includes a review of the agricultural activities of the Department during the past year as reported by the various Branches of the Department.

The services and number of personnel of the Department continue to expand. During the year eight persons were added to the technical staff; one to the Veterinary Laboratory, five Assistant District Agriculturists, one Irrigation Specialist and one District Home Economist.

In the performance of its various activities during the year the Department is pleased to acknowledge with thanks the co-operative services rendered by the officials of the Dominion Department of Agriculture, the Faculty of Agriculture at the University, as well as the personnel from other official and unofficial organizations within the Province.

The Department's activities during the year have been enlarged by the inauguration and the establishment of a Brucellosis Restricted Area Program for the elimination of Brucellosis among cattle, and by endeavouring to bring the entire Province under the T.B. Restricted Area Program. At present practically all Municipalities within the Province have petitioned or are petitioning the Department for the establishment of the latter program.

The construction work for the School of Agriculture at Fairview, Alberta, which was undertaken in 1949, was completed in 1950.

The responsibility for the control of rats was transferred from the Department of Health to this Department and incorporated as a part of our Pest Control Program.

New property was acquired for the Horticultural Station at Brooks and the necessary work undertaken for the transfer of this Station to land outside the Town of Brooks. The operation of the Oliver Tree Nursery, formerly operated by the Department of Lands and Forests, was transferred to this Department and is now under the general supervision of the Field Crops Branch and the direct supervision of Mr. P. D. McCalla, Supervisor of Horticulture. It is hoped that this Station will contribute greatly in providing the necessary supply of trees for the Department's tree planting program.

In compliance with the provisions of the joint agreement as between the Government of Canada and the Province respecting land development within the St. Mary and Milk River Development Project, land surveys are now underway for the location of irrigation ditches to aid in the application of water to farm lands. This work is under the direct supervision of Mr. C. J. McAndrews, Irrigation Specialist.

Mr. P. W. Johnson, Department Secretary, who had rendered most efficient service to the Department and to the Province since 1920, retired on pension, and the vacancy created by his retirement was filled by the appointment of Mr. T. W. Whelan, who previously held the position of Assistant Secretary Accountant.

Respectfully submitted,  
O. S. LONGMAN,  
Deputy Minister.

## REPORT OF FIELD CROPS BRANCH

A. M. WILSON, Commissioner

J. E. BIRDSALL,

Crop Improvement.

G. R. STERLING,

Soil Conservation and Weed Control.

P. D. McCALLA,

Horticulture.

W. LOBAY,

Crop Protection.

## REPORT OF FIELD CROPS COMMISSIONER

A. M. Wilson

Crop yields were again below the long-time average. Sub-soils were generally dry in the Spring with the exception of the south-western part of the province. Surface moisture was excellent at seeding time in the Peace River area, poor in Central Alberta and fair in the South. As the season progressed, timely rains occurred in Southern Alberta. West-central parts became dry except for local showers until early July when rains were general. The Eastern part received higher than average rainfall while the Peace River District dried out almost entirely.

Crop growth and maturity were late in all parts except Southern Alberta. Uneven ripening occurred due to irregular germination and late tillering after summer rains. Frost occurred in Western Canada centering on August 17th for a three or four day period. Although more severe in some parts of Alberta than in others, crop losses were heavy because of reduced yields and more especially by reduction in quality. The Peace River block received the brunt of the cold air; however, in east-central Alberta 2-8 degrees were recorded. It is estimated that 35% of the wheat crop will grade 5 Northern or lower.

Fall rain and early snow in Northern and Eastern Alberta combined with a late frozen crop created many difficulties. Much of the crop in the Provost-Stettler-Hanna triangle remains unthreshed, and its ultimate value will depend on Spring weather that will permit combining and threshing. Severe hail storms, although local, occurred in the Glenwood, Stavely, Champion, DeWinton, Didsbury, Olds, Ferintosh, Provost, Edmonton areas, and in the Bear Lake-Sexsmith-Rycroft district of the Peace River area.

P.F.A.A. payments will not be made to as many townships as in 1949. However, it is expected that a large portion of the Peace River district will qualify due to dry weather, hail and frost. An area north and east from Edmonton, from St. Paul to Minburn on the east to Boyle and Fort Saskatchewan on the west produced low yielding crops because of the extremely dry conditions which prevailed throughout the growing season.

The acreage of wheat was one-third of a million less in 1950 than in 1949. In spite of this decrease in acreage planted and lower initial payments made by the Board the net income to farmers from the wheat crop may ultimately be greater in 1950 than in 1949. Average yields per acre were up 3.3 bus. from the previous year. The 1950 crop was estimated at 16.1 bus. per acre as compared with 12.8 in 1949.

The barley acreage was substantially increased by 416,000 acres, oats by 200,000 and flax which is grown on a relatively small acreage by 11,000. The shift to coarse grains may be attributed to an uncertainty with respect to a market price for wheat, and to a delayed seeding period over central

## DEPARTMENT OF AGRICULTURE

Alberta due to dry soil conditions. Seed barley was more readily available than oats, consequently the acreage of this crop was most significantly increased.

Acreages and estimated yields of the principal grain crops in 1950 compared with 1949 are as follows:

	Acreage	Yield (bushels per acre)		Long time Average	
	1950	1949	1950	1949	
Wheat .....	7,251,000	7,586,000	16.1	12.8	17.0
Oats .....	2,455,000	2,255,000	29.3	23.0	32.0
Barley .....	2,534,000	2,118,000	22.1	17.0	24.5
Rye .....	312,000	325,000	13.5	7.4	12.4
Flax .....	48,300	87,500	9.0	8.0	8.0
Summerfallow .....	5,950,000	6,116,000			

Of particular interest is the increased production of brome, sweet clover and alfalfa seed. Because of high prevailing prices for brome in 1949 many fields usually cut for hay were left for seed. As a result it is estimated six million pounds were harvested. This large crop depressed prices and some growers who recognized they had a thin crop but believed they had a profitable one found that returns barely paid their harvest expenses. Sweet clover seed production reached an all time high of an estimated thirteen million pounds. Prices of this seed crop have remained fairly steady. Because seed sets were exceptionally good and in spite of frost losses alfalfa seed crops were very good.

Minor crop production remained fairly constant with exception of potatoes in the commercial growing areas. Better than average yields on irrigated farms and an increase of three thousand acres has created marketing problems, especially so when compared with the high prices paid for table stock in 1949.

At the close of the year snowfall was generally light, however, surface and sub-soil moisture from fall rains showed considerable improvement over 1949.

### CROP IMPROVEMENT SERVICE

J. E. Birdsall

#### FORAGE CROP SEED DISTRIBUTION

The Forage Crop Policy of purchasing and holding in reserve large quantities of seed for distribution was discontinued. The Seed Trade was informed of the Government's decision to discontinue the distribution plan early in the year, and they were requested to establish retail outlets to provide the service. Indications are that it was done reasonably well with a total distribution of approximately 1,620,000 pounds being made. The following table gives approximate quantities in pounds of the different kinds of seed distributed by seed handling organizations:

Alfalfa .....	260,000	Brome .....	300,000
Alsike .....	70,000	Creeping Red Fescue .....	75,000
Psd Clover (Altaswede) .....	75,000	Crested Wheat Grass .....	50,000
Sweet Clover .....	600,000	Timothy .....	90,000
Mixtures .....	100,000		

One factor which affected the distribution was the high price paid for sweet clover. There was a heavy demand for seed of this clover, as many farmers looked to it as an easy money crop. At the end of the year sweet clover seed had dropped to a very low price, which proved the folly of this idea. Forage crop seed prices generally were slightly higher than in 1949, thereby reaching an all-time high.

## CROP IMPROVEMENT DEMONSTRATION POLICY

This policy was expanded in 1950 to include a new project known as the "Balanced Farming Project". It is designed for the use of District Agriculturists in demonstrations relative to better crops and cropping practices, including soil conservation and weed control. Project "D", "Field Peas", was dropped through lack of interest. Seed and fertilizer were supplied on approved applications under Projects "A", "B" and "C" at half cost. Approximately 50 Field Days were held by District Agriculturists, using the plots and fields established to demonstrate recommended practices and crops.

### Project A: Forage Crop Seed Production

This project was used to encourage and demonstrate pure seed production of grasses and legumes in areas to which they are suited. As an example of its usefulness, Ladak alfalfa was made available to new settlers in areas where other varieties were not being grown. A total of 135 applications were received from 19 District Agriculturists. The following distribution of seed was made:

	No. of Applications	Quantity Distributed (lbs.)
Grimm Alfalfa	Registered 33	1,610
Ladak Alfalfa	Registered 34	1,625
Ferax Alfalfa	Registered 4	200
Altaswede	Registered 15	735
Alsike	Field Inspected 6	300
Creeping Red Fescue	Registered 20	985
Crested Wheat Grass	Registered 16	800
Brome Grass	Certified 5	220
Sweet Clover,		
White Blossom	No. 1 Seed 2	100
	TOTAL 135	6,575

### Project B: Pasture Improvement

This project was used to provide a means of demonstrating the value of improved pasture mixtures and pasture management practices. A total of 211 applications for improved mixtures was received from farmers in 27 District Agriculturists' territories. The following quantities of seed were used in filling them:

Alfalfa .....	4,627 lbs.	Red Top .....	110 lbs.
Altaswede .....	718 lbs.	Kentucky Blue Grass .....	58 lbs.
Alsike .....	1,205 lbs.	White Dutch Clover .....	32 lbs.
White Blossom Sweet Clover	276 lbs.	Reed Canary Grass .....	8 lbs.
Yellow Blossom Sweet Clover	70 lbs.	Orchard Grass .....	48 lbs.
Creeping Red Fescue .....	3,442 lbs.	Alsike-Timothy Mixture .....	54 lbs.
Crested Wheat .....	1,129 lbs.	Alfalfa-Sweet Clover Mixture .....	15 lbs.
Brome Grass .....	8,019 lbs.	White Blossom and Yellow	
Timothy .....	761 lbs.	Blossom Sweet Clover Mix-	
Total .....	20,597 lbs.	ture .....	35 lbs.

In addition, fertilizer was supplied to 12 applicants who had established pastures in 1949 under the project. The following quantities were used:

Ammonium Phosphate (11-48) .....	2,680 lbs.
Ammonium Phosphate, (16-20) .....	1,150 lbs.
Ammonium Sulphate .....	600 lbs.

### Project C: Soil Conservation and Weed Control With Forage Crops, Cereals and Fertilizers

See section of report dealing with soil conservation and weed control.

### Project D: Field Demonstrations—Crops and Fertilizers

This project was designed to demonstrate the value of different kinds and varieties of field crops and in some instances the value of fertilizers on crops. Seed and fertilizers were supplied direct to District Agriculturists

## DEPARTMENT OF AGRICULTURE

without cost. Quantities allocated to each District Agriculturist were limited. Fifteen District Agriculturists used the project. The following quantities of seed and fertilizer were distributed:

Alfalfa .....	161	lbs.	Orchard Grass .....	1 lb.
Altaswede .....	172	lbs.	Montcalm Barley .....	6 bus.
Alsike .....	46	lbs.	Olli Barley .....	4 bus.
White Blossom Sweet Clover	120	lbs.	Newal Barley .....	4 bus.
Yellow Blossom Sweet Clover	20	lbs.	Warrior Barley .....	6 bus.
Timothy .....	6	lbs.	Titan Barley .....	2 bus.
Brome Grass .....	208	lbs.	Compana Barley .....	2 bus.
Creeping Red Fescue .....	168	lbs.	Larain Oats .....	18 bus.
Crested Wheat Grass .....	56	lbs.	Ajax Oats .....	6 bus.
Ladino Clover .....	1½	lbs.	Beaver Oats .....	3 bus.
Reed Canary Grass .....	1	lb..	Eagle Oats .....	2 bus.
Kentucky Blue Grass .....	1	lb.	Saunders Wheat .....	2 bus.
Ammonium Sulphate .....				600 lbs.
Ammonium Phosphate (11-48) .....				2,000 lbs.
Ammonium Phosphate (16-20) .....				800 lbs.

#### Project E: Crop Variety Demonstration Plots

This project was used by District Agriculturists for the establishment of demonstration plots of cereal and forage crops as a community project. In many cases Field Days were held at the plots. Seed and fertilizer for 55 demonstrations were provided to 16 District Agriculturists. This was an increase from 1949 when 11 District Agriculturists received material for 27 demonstration plots.

#### Project F: Balanced Farming

The object of the project is to encourage farmers to adopt a system of balanced farming which includes grasses and legumes in rotation. This was made available to applicants who had clearly demonstrated that they were undertaking to establish rotations using forage crops at least to the extent necessary to maintain the fibre and fertility of the soil. Assistance by way of providing forage seed was given in the second year of the rotation at a discount of 25% for a maximum of 1/6 or up to 25 acres to be included in the rotation. The project was outlined late in the season so that only 3 applications were received and 840 pounds of forage crop seed were used. Wide interest was indicated on the part of District Agriculturists as they considered this a very useful project for the encouragement of farmers who needed help and guidance in getting started in a proper planned rotation.

### FORAGE CROP SEED PRODUCTION

The producing acreage of forage crop seed was very large in 1950, however, severe weather hazards drastically reduced production of some crops. The creeping red fescue crop was very short as a result of spring and early summer drought. Brome, on the other hand, came through the dry weather well and was not affected by the August frost, which severely damaged alfalfa and sweet clover. Red clover and alsike were retarded and stands reduced or destroyed by spring drought, but a surprisingly large acreage recovered after late summer rains. The sweet clover weevil reduced yields of this crop, particularly in the south. 1950 will be remembered as a year in which alfalfa set seed well in practically all districts. It was only by reason of the severe frost centered on August 18th that an unprecedented crop was not harvested. Both quality and quantity of alfalfa and sweet clover seed were seriously decreased by the frost.

The following figures give the estimated forage seed production in Alberta of the most important forage seed crops for the years 1945 to 1950 inclusive:

	1945	1946	1947	1948	1949	1950
Alfalfa .....	4,000,000	3,500,000	2,500,000	9,600,000	8,500,000	7,000,000
Sweet Clover ..	4,000,000	5,000,000	6,000,000	12,960,000	8,000,000	12,000,000
Red Clover ..	1,300,000	850,000	1,500,000	6,000,000	2,000,000	800,000
Alsike .....	1,200,000	1,000,000	2,000,000	6,500,000	2,000,000	1,200,000
Timothy .....	1,000,000	750,000	150,000	200,000	140,000	150,000
Crested Wheat .....	200,000	100,000	50,000	60,000	60,000	200,000
Brome Grass .....	4,000,000	4,500,000	4,000,000	4,000,000	2,000,000	6,000,000
Creeping Red Fescue .....	850,000	250,000	500,000	1,400,000	1,000,000	250,000

Marketing facilities remained essentially unchanged from the previous year. The Alberta Seed Growers' Co-op. with its affiliated Associations, made improvements in their seed cleaning and warehousing facilities but did not increase them. In addition to their large plant at Camrose they now have 24 warehouses for the receiving and distribution of seed and 140 agencies. Field Superintendents of the Co-operative at Red Deer, Thorsby, Westlock, Falher and Peace River were in charge of buying and selling forage crop and cereal seeds. At the beginning of the marketing season this Co-operative also took over the management of the Peace River Seed Growers' Association Plant at Grande Prairie and undertook to service the area.

### ASSISTANCE TO SETTLERS ON LAND CLEARING AND BREAKING PROJECTS

Veteran settlers on new land in the Peace River area were given advice with regard to use of clean seed and were assisted under the Crop Improvement Demonstration Policy to the greatest extent possible. It is hoped that a clean-seed consciousness and an appreciation of the value of forage crops can be developed in these new areas in order to avoid difficulties arising from weed infestations and reduced soil fertility.

Under the Agricultural Relief Advances Act the following quantities of seed grain were supplied to necessitous settlers:

320 bus. Victory Oats.  
80 bus. Ajax Oats.  
568 bus. Saunders Wheat.  
201 bus. Olli Barley.

In addition, fuel oil to the value of \$531.28 was supplied to settlers who were hauled out, in order that the land might be summerfallowed.

### PRODUCTION AND SALE OF REGISTERED SEED

In the following table a summary is given of estimated yields of cereal and flax seed inspected for registration and certification, compared with estimated yields in the 4 previous years.

	Estimated Yield (Bushels)				Estimated Viable Seed (bus.)	
	1946	1947	1948	1949	1950	
Wheat .....	44,259	1,111,669	2,849,000	1,153,736	700,000	
Oats .....	1,173,039	1,719,424	2,250,000	702,384	764,000	
Barley .....	232,524	392,389	788,000	215,988	309,000	
Flax .....	26,273	58,551	175,000	12,000	26,000	

These production figures are still greatly in excess of the normal distribution of registered seed within the province. However, with no export outlets in prospect and a heavy demand for commercial seed in areas of crop failure, many growers were disposing of their crop in bulk as commercial seed. At the end of the year few growers had begun to clean grain for inspection and sale as registered and certified seed. The poorer quality grain eligible for registration and certification had been marketed in the elevators as commercial grain or was being fed to livestock.

## DEPARTMENT OF AGRICULTURE

In the following table a summary is given of acreages of grasses and legume crops inspected for registration and certification over a four-year period:

	Registered (Acres)				Certified (Acres)			
	1947	1948	1949	1950	1947	1948	1949	1950
Alfalfa .....	9,029	10,888	9,640	9,351	678	555	502	651
Brome .....	56	186	175	294	11,452	10,861	6,284	15,976
Creeping Red Fescue .....	168	217	86	79	2,890	5,810	5,249	3,136
Crested Wheat ..	11	.....	20	76	325	110	115	158
Red Clover (Alitaswede) ..	125	263	251	356	258	237	288	57
Sweet Clover .....	.....	130	55	12	374	758	92	720

Because of the high prices paid for brome in 1949 farmers requested inspection on large acreages in 1950. The decrease in inspections of Creeping Red Fescue was the result of crop failures due to spring drought.

## THE ALBERTA CROP IMPROVEMENT ASSOCIATION

This Association has concerned itself primarily with the problem of encouraging the wider use of registered and certified cereal grains for the purpose of maintaining or improving the quality of commercial crops. Through the co-operation of grain companies and the Alberta Seed Growers' Co-operative, arrangements were completed whereby elevator agents were authorized to accept farmers' orders for registered and certified seed grain. Seed stocks were in most cases ample and practically all orders received were filled. The Association is directed by a committee which represents the North-West Line Elevators Association; the farmer-owned elevator companies; Plant Products Division, Dominion Department of Agriculture; the Alberta Seed Growers' Co-operative; the Canadian Seed Growers' Association, Alberta Branch; the University of Alberta and the Alberta Department of Agriculture.

Registered and certified seed grain marketed through the Alberta Crop Improvement Association 1950 in comparison with previous years is as follows:

	1943	1944	1945	1946	1947	1948	1949	1950
Wheat .....	3,000	9,232	20,014	23,728	35,179	45,279	32,951	38,623
Oats .....	10,500	16,001	11,670	26,560	35,225	43,462	34,398	47,227
Barley .....	2,500	6,579	2,450	15,492	23,972	19,616	14,860	14,082
Flax .....	.....	1,215	328	1,194	11,321	10,419	329	820
Rye .....	.....	.....	.....	208	346	105	59	186

16,000 33,037 34,462 67,182 106,053 118,881 82,597 100,928

A great deal of credit is due to grain companies and elevator agents for the success of this method of seed distribution. Experienced growers cooperated well in having seed cleaned, sacked and sealed as early as possible, as well as by filling orders promptly. It should be noted too that farmers who marketed grain as seed did not receive participation certificates and so will not benefit by additional payments made by the Wheat Board on grain sold through regular channels.

## THE CANADIAN SEED GROWERS' ASSOCIATION (Alberta Branch)

Regional branches of the Canadian Seed Growers' Association have as their main function the dissemination of information relative to seed growing. They also endeavor to make farmers better-seed conscious and by so doing improve the quality of crops produced. Such a program increases the demand for registered seed. As this is a crop improvement program and since the Alberta Branch endeavors to serve the entire Province, the Supervisor of Crop Improvement, a member of the staff of the Field Crops Branch, acts as Secretary.

## I. Annual Meeting, Growers' Schools, and Field Days

In 1950 the Branch did not hold any special Seed Growers' Field Days but did co-operate with the Dominion Experimental Farms in Field Days at Lacombe and Airdrie.

The Annual Meeting, as well as Schools for registered and elite growers, was held at Beaverlodge, while at Lacombe an Elite Growers' School was held on the day following the Annual Cereal Field Day. Attendance at the Annual Meeting and Registered Growers' School was 85, while the Beaverlodge Elite Growers' School drew 50 growers and the one at Lacombe 30.

These functions are very effective crop improvement projects, giving guidance and inspiration to a group of farmers who provide the seed stocks with which the rank and file of Alberta farmers maintain the purity of their crops.

## 2. Information, Publicity and Finances

Five circular letters were prepared and mailed to growers of registered and certified seed during the year. The C.S.G.A. publication "First Steps" was also made available to growers. The Branch publication "Hints for Growers of Registered and Certified Seed" was supplied to those who wished information on both types of seed.

In order to promote the use of registered seed and to encourage early ordering, spot announcements were broadcast over one station at each of the centres, Edmonton, Calgary, Lethbridge and Grande Prairie. These were repeated once a week for four weeks late in January and early in February. In addition, publicity material was supplied to radio stations and to the press for general use.

The Branch purchased one copy of the Canadian Seed Growers' Association film, "The Sower Went Forth" and made it available through the Extension Branch to interested groups throughout the Province. In addition it was used at the Olds and Vermilion Schools of Agriculture.

The two dollar membership fee put into effect in 1947 was again collected for the Branch by the central office of the C.S.G.A. at Ottawa. Nine hundred and sixty-four members paid the fee.

Plans were made for a publicity campaign employing all extension methods to publicize the value of good seed, sources of supply and distribution mediums.

## 3. C.S.G.A. Membership

Membership in the Canadian Seed Growers' Association, which rose steadily from 1943 to 1948, dropped sharply in the 1949-1950 Association year. The following table gives total membership of the C.S.G.A. for Canada and for Alberta for the years 1940 to 1949 inclusive:

Year	Alberta	Canada	Alberta in % of Canada
1940 .....	349	3,491	10.0
1941 .....	315	3,035	10.4
1942 .....	274	2,657	10.4
1943 .....	244	2,523	9.7
1944 .....	340	2,586	13.1
1945 .....	522	2,731	19.1
1946 .....	756	3,402	22.2
1947 .....	1,694	4,670	36.3
1948 .....	2,073	5,894	35.2
1949 .....	1,107	4,058	27.3

At the end of the year it was obvious that as a result of fewer inspections and of crop losses in the Province there would be a further reduction

in the number of growers receiving crop registration certificates. This would, no doubt, be true for Canada as well. The general reduction is the result of a loss of export markets for cereal seed, particularly wheat, which were available to growers in the early post war years.

### The Alberta Varietal Zonation Committee

This is a committee of the Provincial Seed Board. Its purpose is to co-ordinate the findings of the various experimental agencies in the province with respect to grain varieties and to recommend those best suited to the various soil climatic zones. The committee is composed of representatives of the following: Departments of Plant Science and Soils, University of Alberta; Provincial Field Crops Branch and Dominion Experimental Farms, Science and Production Services. The annual meeting of the committee was held in December, at which time a revised zonation map, making sub-divisions in Zones 2, 3 and 4 was recommended. Variety recommendations were made on the basis of the revised map. The Experimental Stations were asked to assume the responsibility of establishing additional test plots where necessary to obtain adequate data with regard to the performance of crop varieties in the various zones and sub-zones.

The only new variety recommended was the smooth-awned feed barley known as "Vantage". It was recommended for all areas except the north-eastern part of Zone 2 and the north-west portions of Zone 3.

The varieties recommended were as follows:

#### Wheat

Hard Spring—Saunders, Thatcher and Rescue.  
Hard Winter—Kharkov and Yogo.  
Soft White Spring—Lemhi.

Oats—Ajax, Beaver, Eagle, Larain, Victory.

#### Barley

Malting—Olli, Montcalm.  
Feed—Compana, Newal, Olli, Montcalm, Titan, Trebi, Vantage.

Rye—Prolific Spring and Dakold Fall.

The recommendations of the committee were printed in bulletin form by the Field Crops Branch and widely distributed throughout the Province.

## PRODUCTION OF SPECIALTY CROPS

### Soft White Spring Wheat

The acreage of this crop, which is used for making pastry flour, was greatly reduced. Production was discontinued on the gray-wooded soils and the acreage contracted in the irrigated areas by milling companies was much less than in 1949 when a total of 35,000 acres was seeded. The variety "Lemhi", since it has the desired low protein content when grown under irrigation and is desirable in other respects, is the only one grown.

### Mustard Seed

Mustard seed has been grown successfully under dry land conditions in southern and eastern Alberta for several years. Since the market for it is limited it is practically all grown under contract with commercial firms. After very little being contracted in 1949 the crop staged a comeback in 1950 when approximately 13,000 acres were sown. This was all of the yellow variety. In spite of hail, dry weather and some frost the average yield was 600 pounds per acre, which yield is well above average. Farmers received 5½ cents per pound for the seed.

## INTERNATIONAL SEED SHOWS

For several years the Department of Agriculture, recognizing the value of International Shows as show windows for farm products, has given assistance to exhibitors in the seed classes at the Royal Agricultural Winter Fair, Toronto, and the International Grain and Hay Show, Chicago. In 1950 exhibits were assembled and shipped to the Shows by the Field Crops Branch, with shipping costs both ways being paid by the Branch. In addition, supervision of the exhibits at the Shows was given by a representative of the Branch and special premiums were paid as follows:

All prize monies were duplicated in connection with the International and were increased by 50 percent in connection with the Royal. A special honorarium of \$25.00 for each first prize in the classes for hard red spring wheat, white oats, six-rowed barley, rye, alfalfa, alsike, red clover, sweet clover, brome, red fescue and russet (Netted Gem) seed potatoes was paid in connection with the Royal, and in all seed sections at the International. Such honoraria were increased to \$100.00 for championships won with hard red spring wheat, rye, white oats and six-rowed barley at both Shows.

Winners of first prizes and championships were as follows:

## ROYAL AGRICULTURAL WINTER FAIR

### Championships—

Wheat, Red Spring	Rickey Sharpe	Munson
Oats, Medium and Late	J. T. Eliuk & Son	Hairy Hill
Rye	Chris Morek	Dickson
Clover (Red)	McCabe Grain Co. Farm	Brooks

### Reserve Championships—

Barley	Thos. E. Brown	Cassils
Oats	Matt. B. Schnurer	Sangudo
Wheat	Howard Roppel	Rockyford

### First Prizes—

Wheat, Red Spring	Alfred Walner	Coaldale
Wheat, White Spring	Thos. E. Brown	Cassils
Oats, White Early	Ronald Robinson	Ponoka
Oats, White Medium	Henry Unruh	Vauxhall
Barley, Six-rowed	J. T. Eliuk & Son	Hairy Hill
Alfalfa	Thos. E. Brown	Cassils
Sweet Clover	H. H. Jansen	Rosemary
Alsike Clover	Tom Corlett	Clairmont
Potatoes, Netted Gem	Tony Obama	Rainier
Field Beans, Small	Thos. E. Brown	Cassils
Field Beans, Large	Thos. E. Brown	Cassils

In addition 11 second place awards, 11 third place awards and 56 other awards were won by Alberta exhibitors.

## International Grain and Hay Show

### Championships—

Barley, Six-rowed	J. T. Eliuk & Son	Hairy Hill
Rye	Chris Morek	Dickson

### First Prizes—

Red Clover	McCabe Grain Co. Farm	Brooks
Alsike Clover	Tom Corlett	Clairmont
Sweet Clover	Stanley Walker	Boyle

In addition 16 second place awards, 5 third place awards and 40 other awards were won by Alberta exhibitors.

## SEED DRILL SURVEY

Results of a seed drill survey conducted in 1949 were widely circulated. This survey, in which 1,939 samples of grain were taken from farmers' drills in 23 Municipalities, revealed a shocking situation. Fifty-one percent of the samples were rejected from a purity standpoint; 17½ percent only would qualify for No. 3 seed; 10 percent for No. 2 seed and only 21½ percent for a No. 1 seed grade. It also revealed that many samples were sown without a germination test and that far too many farmers either did not treat their seed or used formalin, which is not a satisfactory treatment.

The information obtained has been widely publicized with a view to developing a good-seed consciousness on the part of farmers. It is impossible to determine the extent to which this information has been translated into action. Future surveys will follow to determine results.

District Agriculturists and Municipal Field Supervisors used the samples taken and the results of analyses to good effect. It was a major item on the program at a great number of farmer's meetings and short courses. In addition, well attended combined seed shows and short courses, centred around the Seed Drill Survey, were held at 16 points in the Province.

Ten Municipalities carried out surveys in 1950. At the end of the year analyses had not been completed.

### REPORT ON SEED CLEANING PLANTS

There are four large Municipal Seed Cleaning Plants in the Province, built with Government assistance. Two of these were not in operation until February 1st, 1950, so had a comparatively short season's run. For the 1949-1950 season, the output of the four plants was 501,000 bushels.

Indications are that for the 1950-1951 season the output will be increased considerably. Three plants operated on two shifts a day, and when rushed operated on a 24 hour basis.

The plants are seed distribution centres for the Municipal Districts and serve farmers with facilities to have their own grain cleaned for seed. Two thousand farmers used the plants in obtaining or preparing seed grain.

There were also 109 privately owned custom cleaning plants operating. Fifty-nine of these were portable plants, and 50 were stationary. Six of these plants are owned by registered seed growers, and do no custom work except an occasional lot of registered seed for a neighbor grower.

A number of private plants were built or remodelled during the year. Plans and specifications of building and information on cleaning machines have been provided to individual and farm organizations. Good seed cleaning facilities are yet not adequate.

There was quite a variation in the plants reported. Due to their construction and operation some were quite capable and safe to handle registered seed. Others are suitable to handle commercial seed only.

Inspection of plants was undertaken with a view to checking on the type and construction of the plants and the method of operation, and to assist in every way possible to improve the general level of seed farmer's plant.

The average output of a number of private operators reported for the season was 25,000 bushels cleaned per machine. At this rate the 109 private plants along with the four central plants would clean over 3½ million bushels for the current season.

Grain elevators with dockage machines installed are not cleaning plants, because bins, legs, etc. have not been brought up to a safe standard. Contaminating farmers' grain with new weeds and mixing of varieties is inevitable. A few elevators have been remodelled and with care of operation may function for commercial seed cleaning.

## SOIL CONSERVATION AND WEED CONTROL

G. R. Sterling

### WEED CONTROL

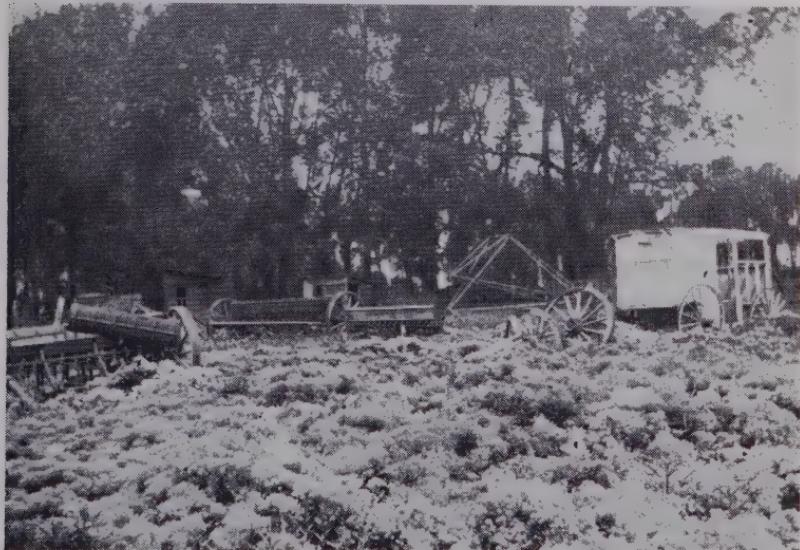
Climatic conditions throughout the Southern part of the province were favorable during the spring of 1950 for control of weeds by cultural methods. The dry weather which prevailed from Calgary north made cultural control methods for annual weeds ineffective during the spring season. The usual crop of annuals could not be grown out and destroyed by cultural means prior to seeding operations. In fact, many of the seeds in the soil throughout the northern part of the province did not germinate until mid-summer.

2,4-D continued to create general interest in weed control and as a result cultural methods in many areas also improved. At the same time the use of chemicals increased in 1950 over previous years.

Weed control topics are still popular at farm meetings. The interest in chemical control has at the same time made farmers more conscious and interested in cultural methods. District Agriculturists, Field Supervisors, and Weed Inspectors assisted wherever possible by the Field Crops staff held 222 Weed meetings throughout the province which were attended by 8,500 farmers.

### SURVEY OF THE DISTRIBUTION AND CONTROL OF HOARY CRESSES IN ALBERTA

The 1949 survey of the 5 bad weeds in Alberta, conducted by the Field Crops Branch and financially assisted by the Division of Botany and Plant Pathology, Dominion Department of Agriculture, was continued in 1950. The survey, conducted by Dr. W. G. Corns, studied the relationships between habitats, and control measures of the Hoary Cresses in Alberta. It was found that most Cress infestations originated about 25 or more years ago and came in as impurities in legume seed. Irrigation in Southern Al-



Hoary Cress will take over this Lethbridge farm unless sound control measures are practiced.

berta appears to have been responsible for the spread of infestations in that area. Cresses can grow under a variety of soil conditions provided moisture is available in at least moderate supply. They were found on both alkali and non-alkali soils.



Hoary Cress on roadside near Lethbridge

The following methods are being practised for Cress control.

(1) SODIUM CHLORATE is used to eradicate small patches before they become large infestations. A second treatment is usually necessary.

(2) INTENSIVE CULTIVATION is a method of control that requires two or three years and may leave the land very vulnerable to erosion. In general farmers have not been too successful in using this method of control.

(3) ALTERNATE TILLAGE AND GRAIN including the use of selective herbicides on the growing crop is giving fair results. One year's summer-fallowing preceding this method is advantageous. Seeding to fall rye then applying a 4-ounce application of 2,4-D during the crop year is being practised particularly in the Cowley district.

(4) GRASSING INFESTED AREA AND USING A SELECTIVE HERBICIDE for two or three seasons is very effective. This method has effected eradication in several locations. It also leaves the land in a more fertile condition.

Dr. Corns states in summary as follows: "The grass and 2,4-D combination appears to hold most promise in eradication of Hoary Cresses in large acreages while at the same time providing for hay and pasture returns and assistance in soil conservation."

### WEED CONTROL BY CHEMICAL MEANS

The dry backward spring and early summer of 1950 made farmers delay spraying operations. In spite of this however, 2,904,000 acres were treated. This represents an increase of 1,000,000 acres over 1949. Seventy-six percent of the 2,4-D applied was in the spray form. About 35,000 acres were sprayed by aircraft. Most of the 2,4-D was applied after midsummer rains when the growing conditions were good.

The Field Crops Branch conducted three trials for the control of Tartary Buckwheat, located at Mundare, Royal Park and north-east of Edmonton. Several formulations of 2,4-D and Sinox were used. These trials indicated that Tartary Buckwheat can best be controlled when sprayed during the very early stages and also that low volatile 2,4-D gave best results.

Five trials were established on brush with 2,4-D and 2,4,5-T.

Twelve demonstration plots of polobar chlorate and borascu were set out last fall on such weeds as thistle, leafy spurge, hoary cress, toadflax and quack grass. These plots are located at Edmonton (2), Camrose (2), Wetaskiwin (1), Balzac (1), Dalroy (1), Calgary (1), Cardston (3) and Raley (1).

The Department of Public Works initiated a policy of roadside spraying of provincial highways. A member of our staff assisted their personnel in initiating this program. Results of sprays were satisfactory and the increased use of sprayers on highways is recommended.

The Department continued to distribute Sodium Chlorate through Municipal offices and Weed Inspectors to farmers. The following quantities were distributed in each of the last five years.

1946—128,000      1947—100,000      1948—187,000      1949—180,500      1950—207,940

The steady increase in quantities used indicates that Field Supervisors and Weed Inspectors are locating and effecting control on more patches of hard-to-control perennials in their districts.

### CULTURAL WEED CONTROL DEMONSTRATIONS

District Agriculturists, Field Supervisors and Weed Inspectors assisted by the Department established 102 field demonstrations. The Department supplied 1,400 pounds grass seed, 74 bushels of cereals and 2,500 pounds fertilizer for these demonstrations. Most of these demonstrations were on cultural control; however, many included a combination of both cultural and chemical means. Sixty-one field days or meetings were held in connection with these demonstrations, attended by 1,800 people.

### CROWN LANDS:

During 1949 the Department of Agriculture supplied forage seed for weed infested Crown lands where a special lease agreement was issued, by

the Department of Lands and Forests. Several Weed Inspectors and Field Supervisors using this policy as a weed control measure have had weed infested areas, by arrangement with the Department of Lands and Forests, leased and broken in preparation for seeding to forage crops in the spring of 1951. This policy has been well received and will reduce the weed menace on accrued areas of Crown land.

The Department also provided 2,4-D to farmers who were prepared to spray weed infested Crown lands which were a menace to the farmer concerned.

### ROADSIDE SEEDING

The Field Crops Branch continued the policy of co-operating with the Department of Public Works in seeding to grass the ditches of 426 miles of Government highways. The cost of seed was paid by the Department of Public Works and the seeding was done by the Department of Agriculture. A total of 32,360 pounds of forage seed was used for this project.

The Branch continued to encourage Municipalities to seed down ditches of Municipal roads. A total of 19,300 pounds of seed was used for this demonstration policy. Many of the Municipalities are now buying sufficient seed to cover the remainder of their road ditches.

### AGRICULTURAL SERVICE BOARDS

One new Agricultural Service Board was formed in I.D. 138 with headquarters at Manning. Several Field Supervisors resigned to take other employment but all vacated positions have been filled. The long range programme of weed control adopted by the Agricultural Service Board is having effect. From 1945 to 1949 inclusive, the Boards placed 287 parcels of land under supervision. Another 65 were put under during 1950. Only 89 have required an advance of Municipal funds in order to carry out the eradication programme. Thirty-two parcels have already repaid such advances. During 1950, 87 supervised parcels were returned to the rightful owners in a weed free condition. This is 22 more than the number taken under supervision during 1950 indicating that progress is being made.

Up to 1949, 41 farms were put under reclamation, four more being placed under reclamation during 1950. Twenty-four of the total placed under reclamation have been reclaimed and returned to the rightful owners in a productive state. All have paid off the Municipal advances needed and at the same time the weeds have been brought under control.

### FIELD STAFF AND OTHER SERVICES

The Noxious Weed Act was administered in Local Improvement Districts under the direction of 18 Weed Inspectors employed by the Field Crops Branch. Four fieldmen were employed by the Branch to assist Weed Inspectors with local problems and formed a co-ordinating link between the Department and the Inspectors. Municipalities with Agricultural Service Boards employed 29 Field Supervisors and 52 men who worked during the summer months. A total of 45 Inspectors were employed as Weed Inspectors for Municipalities without Service Boards. The total field force during the summer months was 148 men. The following meetings were held to assist Field Supervisors, Weed Inspectors, etc. with their problems:

Annual Service Board Conference, Edmonton, Alberta.

Spring Meetings of Weed Inspectors at Spirit River, Lethbridge, Edmonton.

Regional Meetings of Field Supervisors and District Agriculturists at Calgary, Edmonton, Vegreville.

### SOIL CONSERVATION

Many fields in the northern part of the province, particularly north-east of Edmonton, drifted badly during the spring. Practically every bare field which was summerfallowed in 1949 in the area mentioned drifted to a degree. Several roadside ditches in the area from Vegreville north through Willingdon to St. Paul were completely filled. This drifting was due partly to the dry year and of course much of this land was summerfallowed, over-worked and very vulnerable to soil drifting. Drifting occurred in localized areas of the south where trash cover had not been maintained. The spring of 1950 was the second consecutive year when more drifting occurred from



Drift Soil from summerfallowed field, north-west of Lamont—Spring 1950

Red Deer north than in the southern part of the province; the area that was known as "the Alberta Dust Bowl" in the 1930's.

Spring water erosion was not as severe as in previous years. While much of our land was in a condition vulnerable to this type of erosion, the gradual break up allowed the water to get away slowly, making erosion less severe.

### TRASH COVER

The severe soil drifting which occurred during the two previous springs in the area north and east of Edmonton made farmers more conscious of soil losses. Several farmers accompanied by District Agriculturists from an area east of Edmonton studied trash cover methods of southern Alberta first hand. This southern trip was followed up by a series of fall meetings in the Vegreville, Willingdon and Vermilion districts, at which such farming

practices as trash cover, seeding to forage crops, eliminating black summer-fallow, livestock, and other programmes were advocated. Several farmers in the area have obtained blade type cultivators and have already used them to maintain trash cover. It is forecast that the practice of maintaining trash cover by blade cultivators will move northward into this area in the near future.

Conservation Projects (Project C) which provide material at half cost to farmers, through District Agriculturists and Agricultural Service Boards, to encourage better conservation methods served a very useful purpose. Seed was supplied for such things as seeding down eroded gullies, land



Part of Gully on farm north-east of Leduc. Reclaimed in 1950.

that was subject to sheet erosion, or land infested with weeds where forage crops could be used to control them. All applications under this policy were approved by the District Agriculturist. Eighty-five applications were approved and the following quantities of seed were supplied at half price:

Alfalfa .....	3,021 pounds
Cert. Brome .....	2,839 pounds
Cert. Fescue .....	1,329 pounds
Crested Wheat .....	492 pounds
Sweet Clover .....	13,098 pounds
Alsike .....	224 pounds
Altaswede .....	237 pounds
Alsike-Timothy Mixture .....	20 pounds
Timothy No. 1 .....	30 pounds
Red Top .....	10 pounds

Project "F" was designed to assist District Agriculturists with the "Balance Farming Programme" and is reported in the "Crop Improvement Section" of the Field Crops Report.

#### SOIL CONSERVATION SURVEY

Eight Municipalities conducted a random survey within their Municipality to determine what conservation practices are being followed. Wherever possible the same two quarters within each township throughout the Municipality were included in this survey. The Supervisors did the survey by personally contacting a total of 325 farmers.

Results of the survey are as follows:

(1) Two Municipalities which have large areas in the Edmonton milk shed have high percentages of their land in hay and pasture. There is also a large percentage of farms with a systematic rotation. In the other six Municipalities 12% of the acreage is in forage crops, but only about 3% of the farmers have adopted a systematic rotation. All of these Municipalities are in areas with sufficient moisture where legume crops can be grown.

(2) Farmers in the Edmonton milk shed practised least stubble burning, seeded more water courses, maintained more trash cover and generally improved their soil with barnyard manure.

(3) Farmers, both inside and outside the Edmonton milk shed, pulverized the soil and encouraged erosion by pulling cultivating machines too fast. The same types of machines were used in all Municipal Districts surveyed.

#### "SAVE THE SOIL" CAMPAIGN

Thirteen District Agriculturists held "Save the Soil" campaigns or "Farm Improvement" campaigns as outlined under The Agricultural Society Act. A total of 677 farmers participated. The winner at Eckville was a Veteran of the last war who started on the farm in 1946. This Veteran practised a complete rotation and was awarded first prize for his efforts. Other examples where farming practices have changed as a result of campaigns could be cited.

The Field Crops Branch issued the following framed certificate of merit to each contestant making a total score of 80% or more. Fifty such certificates were issued.

# Save The Soil Campaign



*This is to certify that*

of ... Alberta has obtained a score of 80% or more  
in a recognized "Save The Soil" Campaign in the area  
surrounding ... and has farmed his land in  
a manner conducive to soil conservation and weed control.

Dated at Edmonton, this ... day of ... 19 ...

*Minister of Agriculture*

## MEETINGS

Soil Conservation has not only become popular at farm meetings but is also much discussed by city and town organizations. District Agriculturists, Field Supervisors, assisted wherever possible by the Field Crops staff held a total of 268 meetings in connection with Soil Conservation. The attendance at these meetings is recorded at 15,000.

**CROP PROTECTION SERVICE**

Wm. Lobay

The spring of 1950 started with cool and dry weather conditions practically throughout the entire province. This resulted in later insect activity and plant disease development than has been experienced in the last few years. While in 1949 the first field was baited for grasshopper control at Lethbridge on May 9th, there was no demand for bait at this station until June 3rd, 1950, nearly a month later. In spite of later insect activity, damage by insect pests to crops was similar to that of 1949 but damage by various plant diseases was somewhat reduced.

**CROP INSECTS**

Grasshopper infestation in Alberta in 1950 covered approximately 10,000,000 acres of crop and range land in the south and south-eastern portion of the province. A very severe area was centred around Lomond taking in about three townships. Severe hopper infested areas were in the—

- (1) Provost-Bodo-Compeer district involving 4-5 townships.
- (2) Outskirts of the very severe area in Lomond, covering about 3 townships.
- (3) Region just east of Carmangay, covering about 3-4 townships.

Moderate infestations occurred in—

- (1) Regions north and west of Hayter.
- (2) In the area between Esther-Hemaruka, a strip about 20 miles wide.
- (3) In the area between Bindloss and Schuler along the Saskatchewan boundary.
- (4) In a triangle formed by Medicine Hat-Macleod-Vulcan.
- (5) About 8 townships north of the Blackfoot Indian Reserve up to Chancellor and Hussar.

All that area south of Bow Island and Medicine Hat to the Montana border was only lightly infested. A few severe spots developed around Foremost, between Strathmore, through Michichi and Coronation in a line towards Provost infestation was also light.

The three economic species of grasshoppers were generally present throughout all the area with the roadside (*Cannula pellucida*) predominating in the Provost-Bodo area and the lesser migratory (*Melanoplus mexicanus*) and two-striped (*Melanoplus bivatattus*) in the southern regions of the infested area.

Localized outbreaks also appeared this year in the central part of the province (Camrose, Tofield) as well as in the Peace River country (Falher, Eaglesham, Bezanson, Taylor Flats). Damage in these northern regions was generally confined to alfalfa and other clover fields although a few oat fields were attacked. Stations at Faust, Eaglesham and Saskatoon Lake (Grande Prairie) served the area.

Timely control measures were well followed in 1950, generally resulting in negligible crop losses. In the Lomond area where a very severe outbreak was predicted, proper cultural control reduced the infestation to a point where many farmers did not have to apply other control measures. This experience confirms our belief that cultural control for 'hoppers cannot be overstressed.

The only significant crop losses in the province were those in the area between Hayter and Altario along the Saskatchewan boundary. The outbreak in the area was greater than the forecast predicted, resulting in less stockpiling of bait by Municipal Districts and Special Areas. For a short period bait rationing had to be put into effect until more sawdust could be made available. Sprays and dusts were readily made available by the Department in that area but many farmers were not prepared to buy these because of poor crop prospects, lack of sprayers and dusters and because of agitation by a few farmers that the Government should provide all poisons free.

Although the farmers were blaming the grasshoppers for all crop losses, there was evidence that wind erosion on many farms, was an equal, if not greater factor in reducing yields. On many fields bare knolls could be seen from which the young grain seedlings were blown away or cut off by soil which covered up young plants in the depressions.

The Alberta grasshopper policy for 1950 was practically identical to that of 1949. Mixed baits were supplied free to the farmer, the cost being divided equally between the Government and the district concerned. Sprays and dusts were provided at cost to the farmer. These were made available through local governments and other approved distributors.

On the basis of experimental and demonstrational work done with Compound 118 (now known as Aldrin), this material was used as the basic insecticide in preparation of baits, sprays and dusts. Thirty-two thousand seven hundred and fifty pounds of 60% technical Aldrin were purchased and formulated by Chemi-Serve (Alberta) Limited of Calgary into a 25% emulsifiable Aldrin concentrate. About 2 ounces of technical Aldrin per acre was recommended as an effective dosage for grasshoppers; this was equivalent in killing power of grasshoppers to 12 ounces of technical Chlordane per acre, the insecticide used in 1949. The cost of emulsifiable 25% Aldrin concentrate to the farmer was \$7.00 per gallon. One gallon was sufficient material to spray 20 acres. The cost of Aldrin then was 35¢ per acre as compared with 56¢ for Chlordane (one gallon containing 10 lb. technical per acre sold for \$8.00).

In addition to the spray material, 40,000 pounds of 2½% Aldrin dust was purchased for use by farmers. The rate of 5-6 lbs. per acre at first used was found to be too low; this was increased to 9-10 lbs. per acre in the later part of the season. Effective dusting cost the farmer about three times as much as spraying.

During the late winter and early spring about sixteen meetings were held in the infested hopper areas to acquaint farmers with latest control methods. A total of 1,000 farmers attended such meetings. In addition District Agriculturists held meetings relative to this subject at which some 700 farmers were contacted.

The table below shows the extent of infestation and other aspects relative to the grasshopper campaign for the last five years.

## ANNUAL REPORT, 1950

27

	1946	1947	1948	1949	1950
Acres of land in the area....	8,000,000	2,500,000	8,750,000	11,000,000	10,000,000
Acres of crop land menaced	60,000	32,000	195,000	800,000	700,000
No. of stations operated.....	6	11	17	75	76
Bushels of poisoned bait spread .....	16,000	9,100	56,700	191,000	184,000
No. of farms receiving bait .....	242	107	851	2,780	2,336
Estimated acres of crop destroyed .....	1,200	1,000	2,000	2,500	2,000
Estimated pounds of tech. chlordane used .....	.....	.....	800	67,000	23,560
Acres sprayed by Chlordane .....	.....	.....	1,100	52,000	6,550
Acres dusted by Chlordane.....	.....	.....	.....	1,500	500
Estimated pounds of tech. Aldrin used .....	.....	.....	.....	.....	18,000
Acres sprayed by Aldrin .....	.....	.....	.....	.....	100,000
Acres dusted by Aldrin .....	.....	.....	.....	.....	5,000

With regard to literature and information on grasshoppers the following was issued from this office:

- (1) Aldrin bait and spray labels.
- (2) Bulletin No. 85 "Baits, Sprays and Dusts for Grasshopper Control" was revised to include a new spray chart using Chlordane.
- (3) Charts on Application of Aldrin Sprays and Dusts were made available at all bait mixing and distributing stations.
- (4) Mimeographed sheets re Precautions on Use of Aldrin were made available to farmers at all mixing stations.

The amount expended by the Government for grasshopper program was \$81,212.24. Of this amount, \$57,122.94 or 70.3% will be recoverable as per our grasshopper policy.

### WHEAT STEM SAWFLY

The wheat stem sawfly activity was confined to much the same area as last year—the south-eastern portion of the province. Damage was greater than in the past six years on susceptible varieties in all Crop Districts. The more general use of Rescue wheat in infested areas has however, greatly reduced crop losses from sawflies.

Perhaps the greatest losses were in the Macklin-Provost area where from 6% to almost 60% damage occurred.

Heavy infestations also occurred around Warner and extended in spotty losses to Foremost. Generally speaking wheat stem sawfly infestations were not as serious as last year in the area south of Lethbridge, because of the large acreage of Rescue wheat.

The table below shows a comparison of the estimated crop losses due to sawfly in the last 5 years.

Crop District	Loss of Grain in Bushels				
	1946	1947	1948	1949	1950
1	1,050,000	1,289,000	1,021,000	404,000	516,000
2	144,500	143,880	39,700	29,000	32,000
3	180,000	197,500	205,500	197,000	167,000
4	1,680,000	1,586,250	1,018,500	879,000	1,091,000
5	10,000	56,400	113,200	32,000	89,700
6	100,000	150,000	197,700	162,000	178,000
7	5,000	Negligible	Negligible	Negligible	108,000

### CUTWORMS

The Pale Western Cutworm caused slight damage to grainfields in the Consort and Provost districts. Due to a cool, dry spring, infestations were slow in development and crop damage did not show up until after the middle of June when the weather suddenly became warmer. Although cutworms were located in areas around Foremost, Hilda, Hanna and Drumheller, damage was insignificant.

**Army Cutworm damage** was somewhat greater than in 1949. Moths were noted in the Lethbridge and Scandia districts between the periods of June 13th to July 10th and indicated an appreciable increase over last year's flight record.

**The Red-backed Cutworm** did considerable damage to crops and gardens in the area between Lacombe and Edmonton. Some reseeding was necessary. A number of reports were also received from the Athabasca districts of farmers losing the oat crop due to this pest.

It has been observed that moths are more attracted to clumps of weeds on fields than to grain crops or stubble. Farmers were advised to keep their fallow lands clean of weeds to avoid egg laying in the field.

Poisoned bran bait remained the most satisfactory immediate control of the cutworm. A few trials were made using Chlordane and Aldrin in bran baits to see if paris green or sodium fluosilicate (standard poisons) could be replaced with a more effective insecticide. Baits were spread at a rate of about 20 lbs. per acre to contain 3 lbs. technical Chlordane per acre and 12 ozs. technical Aldrin per acre. This work was limited; it did however, indicate that Aldrin and Chlordane could replace the standard poisons.

Work done at the Science Service Laboratories indicate the possibility of cutworm control with sprays and dusts using such new insecticides as Aldrin and Dieldrin. This work is still in progress.

### WIREWORMS

Wireworm damage this year was extensive in the southern part of the province as well as in the Peace River district. Although severe damage to grain also occurred in the central and northern agricultural portions, such damage was localized. In central Alberta damage was recorded at Edmonton, Vegreville, Vermilion, Wainwright, Camrose and Wetaskiwin.

Wireworm damage to potatoes, particularly in the irrigated districts, is causing concern to growers. It is common to see up to 20% loss of marketable potatoes in some districts. One grower in the Edmonton district had to cull up to 50% of his crop due to wireworm damage in order to meet a Canada No. 2 grade.

In addition to cultural control, this Branch has been recommending the use of Benzene hexachloride (BHC) as a grain treatment. Seed treated with this material so that only one ounce of technical BHC is applied per acre will generally reduce the wireworm populations to low levels. One application will cost the farmer about \$1.20 per acre. One commercial firm reports that in the Peace River district alone 800 pounds of their particular product was sold as compared with 64 pounds in 1949.

BHC is sold under various commercial names—Benesan, Mergamma C, etc. Mergamma C contains as well a mercurial compound so that one treatment will protect seed from wireworm damage and smut and give some protection from other seed-borne pathogens.

This Branch obtained 100 lbs. of Mergamma C for testing. Field trials were set out in co-operation with District Agriculturists in areas of the province where wireworms were causing damage. Because of unfavorable weather conditions and hail damage to some plots yield data could only be obtained from 11 out of the 26 plots. Early summer survey indicated that in most cases the wireworm population in treated plots was considerably

reduced. Yield data from the 11 plots indicated that in treated plots, yield increases ranged from 2 to 5 bu. per acre.

### SWEET CLOVER WEEVIL

The sweet clover weevil which first invaded southern Alberta in 1941, has now spread to practically all sections of the province where sweet clover is grown. Heavy crop losses have been confined so far to the southern regions of the province.

From a survey of clover fields the table below indicates the spread of the weevil in 1950.

	1949	1950
Acres sweet clover examined .....	118,640	121,500
Acres on which weevil found .....	13,475	20,500
Acreage light infestation .....	5,935	7,800
Acreage severe infestation .....	7,540	12,700

Trial spraying of infested fields with DDT and Chlordane confirmed last year's results that these insecticides can be used as emergency measures. Demonstrations, using 5 ozs. technical Aldrin per acre also showed that Aldrin gave effective control. There is reason to believe that even smaller dosages of the latter chemical may be effective.

### LYGUS BUG

Lygus bugs interfere with proper alfalfa seed setting and cause considerable reduction in alfalfa seed production wherever they are active. Small outbreaks have occurred in Alberta in previous years, such outbreaks being largely local in nature.

This year an outbreak developed in the Wapiti district of the Peace River country. About 500 acres of alfalfa for seed was grown in that district.

A thirty acre field, heavily infested with the Lygus bug (28 to a 15 inch sweep) belonging to M. Lofstrom of Wapiti was chosen as a trial field to control this insect with DDT. About 20 lbs. per acre of 3% DDT dust was used, applied by a conventional 2, 4-D duster on July 7th. Upon inspection of the field on August 21st, podding on the treated area was found to be far superior to the infested untreated fields. No yield data could be taken as the entire district suffered a disastrous frost on August 16th.

Subsequent testing has indicated that a 25% DDT emulsion used as a spray is superior to DDT dust.

### OTHER CROP PESTS

**Colorado Potato Beetle** infestations were confined to southern Alberta. DDT and Chlordane can eliminate any outbreak very rapidly. Trials in using Aldrin did not prove it to be as effective for this purpose.

**The Red Spider or Mite** was once again a problem on some shrubs and raspberry plots. Reports of infestations were received from Calgary, Didsbury, Lacombe, Edmonton and Vermilion. Hexaethylpyrophosphate (HETP) was not found to be as effective as Parathion. The latter product is highly toxic to man even in small dosages but is one of the best miticides known.

The trials were conducted by the Branch to try out the effectiveness of a new non poisonous miticide known as Aramite (16% Wettable Powder). Infested plum trees and a raspberry plot were treated with this material

at rates recommended by the manufacturer. The red spider population was reduced by 75% within 24 hours. Within 10 days however, the populations had increased to original numbers. No damage was apparent to sprayed foliage.

**Mormon Cricket** was found in areas along the north edge of the Milk River Ridge between Milk River and Spring Coulee. They caused damage to some crops in Montana this year but were not of economic importance in Alberta.

**Pea Aphis** have been on the decrease since 1948. Generally speaking no treatment was found necessary this year.

**Onion Maggot** again caused some concern to onion growers in the Edmonton district. They were also found numerous in gardens at Lougheed and Sedgewick. Growers who used calomel (mercurous chloride) as recommended reported excellent results.

**Ant infestations** in lawns, gardens and houses brought numerous requests for control measures from all parts of Alberta. Chlordane when used as recommended gave excellent results.

**White Grubs** caused damage to potatoes and strawberries at Peers, Edson, Edmonton, Breton, Calgary, Macleod and Medicine Hat. There were many more inquiries received regarding this insect than in 1949.

**Say Stinking Bug** was abundant in the area between Turin and Rettaw—the heaviest since 1943. Favorable weather conditions were considered responsible for the increase this year.

**Corn Earworm** is only an occasional pest in this province. Only very few corn ears were found damaged in the Barnwell-Taber region.

## CROP DISEASES

### CEREAL GRAIN CROPS

No significant outbreaks of diseases on cereal crops appeared in Alberta. Root rots in wheat were noticeable however in many districts and particularly on land continuously cropped for two or three years. The new strain of rust which was reported in Manitoba and to which all of our known varieties of wheat are apparently susceptible, did not appear in Alberta to any extent.

### LEGUMES

As in 1949, bacterial wilt of alfalfa was severe in the southern part of the province. Some of the fields only two years old were seriously affected. Greatest injury appeared on older stands. The Ladak variety, because of its hardiness and resistance to wilt has been recommended.

Winter Crown Rot of alfalfa was noticeable both in southern and northern Alberta points. The root nematode was discovered for the first time in Alberta on alfalfa stands at Lethbridge. The damage done by this pest is practically identical to that caused by Crown Rot. It is expected that more will be heard about this disease in the next few years.

### Bacterial Ringrot Survey in Alberta—1950

Early in the year regulations respecting the control of Bacterial Ringrot were amended as follows:

- (a) Ringrot precautions area in the Edmonton district was changed to Pest Control Area. This was necessary because of the increased incidence of ringrot in that area.
- (b) Pest Control area was extended in the Calgary district to include the Strathmore district.
- (c) Imported potatoes were made subject to inspection for ringrot.

In the fall of 1949 there were 341,370 lbs. of certified seed purchased to have available to those who had disposed of ringrot stocks and had not arranged to get approved seed. There was much demand for this stock and it was sold early in the spring of 1950.

Ringrot inspection started on August 29th. Twenty inspectors were appointed to this service. A two-day session was held at Lethbridge with all inspectors to acquaint them with the disease. In all areas frosts which came early in September interfered with thorough inspection, by making symptoms difficult to detect.

A total of 1,229 commercial fields were inspected in the Pest Areas in the province totalling 12,124 acres of potatoes. This has been the largest inspection since the initiation of the ringrot program in the province. There were 177 more farms and 3,470 more acres inspected than in 1949.

The percentage of inspected farms found diseased decreased from 11.2% in 1949 to 10.5% in 1950. In the last few years however there has been an influx of new growers particularly in the Lethbridge area and also many changes of hands in land management. In many cases this required a complete new education to the new growers acquainting them with the ringrot disease and directing them in control methods. It is impossible to catch up with all new growers at once, resulting in a slowing down of the program.

The following table shows the farms and acreage of potatoes in all pest control areas and the acreage infected with ringrot: 1949 results are presented for comparison purposes:

#### RESULTS OF 1950 RINGROT SURVEY BY PEST AREAS

Pest Area	No. Farms Years	No. Farms Inspected	Acreage Diseased	Acreage Inspected	% Diseased of Total Acreage	% Diseased Farms
Lethbridge*	1950	555	80	6950	1515	21.8
	1949	513	78	4327	747	17.2
Calgary	1950	150	9	876	55	14.6
	1949	104	8	329	18	5.6
Brooks	1950	179	11	2272	196	8.6
	1949	155	12	1855	262	14.1
Edmonton	1950	245	30	2526	320	12.6
	1949	220	20	2152	151	7.0
Total	1950	1229	130	12124	2086	?
	1949	1052	118	8654	1178	?
						10.5
						11.2

\*This includes areas at Hillspring, Taber, Vauxhall, Medicine Hat.

Lethbridge area led in the incidence of ringrot based both as to the number of growers who had infected fields and on the acreage infected. It must be noted that the acreage inspected at Lethbridge this year was 6,950 as compared with 4,327 in 1949 or 2,623 acres more. Only two more growers had ringrot than in 1949.

In the Calgary district one additional farm was found to be diseased.

Conditions have definitely improved at Brooks. There were 417 more acres planted than in 1949, but the ringrot infected acreage was reduced about 40%.

The Edmonton area showed 10 new sources of infection, and the acreage diseased was doubled. It is difficult to know why this increase occurred. As at Lethbridge there were many new growers. Farmers and truck gardeners were encouraged by high prices of potatoes which prevailed last spring to plant additional acreages. The high seed prices (averaging 5c lb. and over for certified stock) led many growers to plant inferior potatoes from anywhere they could be obtained. Too many new growers gave little consideration to the kind of potatoes planted. Others gave the old story that they did not know the regulations.

Diseased stocks were moved under direction of the Department, however at the close of the year approximately 25% had been marketed. Growers with diseased stocks are desperately looking for outlets.

The Department has purchased 160,000 lbs. of Foundation A Netted Gem seed for spring planting. This seed will be available for purchase by growers who are required to dispose of all potatoes from their farms.

### LIVESTOCK PESTS

#### CATTLE GRUBS (WARBLE FLIES)

Since 1948, three Municipal Districts, Bow Valley, Conrich and Mountain View, have requested to have their districts established as warble fly free areas. This year a Cattle Association west of Calgary petitioned to have an area about 4 townships in size declared a warble fly free area. Since many Municipalities with Agricultural Service Boards are conducting warble fly spraying programs, it was suggested to such Municipalities that their Service Board organize the program.

Warble fly campaigns conducted by Service Boards and other organizations are proving effective. The M.D. of Wainwright reported that some districts have discontinued using their sprayer service because very few warbles were present in cattle, but new districts were demanding service. Turner Valley Municipal District reports again that approximately 36,000 head of cattle were treated.

A survey conducted in the fall indicated that about 300,000 head of cattle were treated this year. This is about 100,000 head less than last year. In many districts farmers report that warbles have been reduced to a point that spraying is not necessary—hence a reduction in number of cattle sprayed.

There are however many districts especially in areas north and east of Edmonton where very little fly control work has been done. Observations during the summer showed many herds gadding, hence the need of control. To encourage spraying, four warble fly demonstrations were undertaken, two in the Municipal District of Strathcona, and two in the Municipal District of Eagle.

Much publicity to warble fly control was given through the press, radio and public meetings.

#### SHEEP KEDS

There were about 88,600 sheep treated for ked control as compared with 32,000 last year. Vat dips and sprays were used effectively. Effective control was obtained with sprays using some of the newer insecticides.

## RODENTS

### COLUMBIA GROUND SQUIRREL

This pest makes its appearance yearly in the foothills of southern Alberta. They become particularly troublesome when food supplies diminish on the open range and then move into isolated grain fields. Baiting is practical, but ranchers are reluctant to cover their entire range land. When the time comes for the ground squirrels to congregate on grain fields baiting is too late and a great deal of damage is done to the crop. Control recommendations were mailed to farmers in the area where damage occurred.

### POCKET GOPHERS

The pocket gopher problem was a greater one than in 1949. Very numerous requests for control were received from practically every district in the black soil zone. Mimeographed information was distributed to District Agriculturists' offices.

Work done in 1949 with Antu and Strychnine on pocket gopher control was continued. Results appeared to be quite definite that baits containing strychnine alkaloid were much more effective than those containing Antu.

### NORWAY RATS

As of September 1st, 1950, the Norway Rat by Ministerial Order was declared a pest under the Agricultural Pests Act. By so doing control of this rodent became the responsibility of the Department of Agriculture.

A colony of rats was located on a farm near Alsask last summer. Since then rats have been killed near Sibbald and other points along the Saskatchewan boundary. Dead rats have been reported in box cars at Drumheller, Duchess, Edmonton, Nacmine and Greenshields. Twelve suspected specimens have been brought to this office, however, in all cases but one, all were muskrats.

To inform the public on identification, 25 specimens were preserved in plastic containers and placed in District Agriculturists' offices in areas where the rodents may be first expected to become a problem (along Saskatchewan boundary).

This Branch has requested that Municipalities, cities, towns, villages and hamlets appoint pest control officers to be on the lookout for rats and adopt control measures wherever they may be found. As at the end of the year 103 such officers have been appointed. So far no rats or colonies, other than those mentioned, have been located.

## POTATO PROTECTION AND IMPROVEMENT

### POTATO PRODUCTION

It is estimated that 28,300 acres were planted to potatoes. This is a 2,000 acre increase over that of 1949. High prices during the last three years resulted in many new growers going into the business. Yields in general were very good—many fields in the irrigated areas averaging 14 tons per acre—and the quality and type were better than average. Increased acreages and higher yields resulted in excess total production

not readily saleable. Consequently prices have dropped to a low of \$20.00-25.00 per ton to the producer for a Canada No. 2 (as at December 31st, 1950). Potato acreage in the immediate Lethbridge district has decreased while increased production has shifted to Taber and Vauxhall.

The following table shows the estimated potato production in commercial potato areas in the last two years:

	1949	1950
Lethbridge (revised)	24,000 tons	38,000 tons
Brooks	6,000 tons	7,500 tons
Calgary	400 tons	800 tons
Edmonton	4,000 tons	6,000 tons

It is interesting to note that from January 1st to August 31st, 1950, there were 328 carloads of potatoes imported into Alberta, as follows:

Brooks—6, Edmonton—190, Calgary—132

Imports were from British Columbia, Prince Edward Island, New Brunswick, Manitoba, California and Florida.

No potatoes have been imported into this province this fall. Carloads of 1950 potato crop shipped inter and intra-provincially from different areas up to and including November 30th as follows:

Lethbridge—110, Brooks—43, Edmonton—25, Calgary—0

There was an increase in the seed potato industry. The following table provides in some detail information with respect to the Seed Potato industry within the province.

	1948	1949	1950
No. of seed growers .....	95	99	156
No. of fields inspected .....	....	182	293
Acres inspected for certification .....	781	1,005	1,684
No. of fields receiving certificates .....	....	148	247

A record of all inspected fields was maintained at the Branch. This was used in directing growers to sources of good seed. Twelve seed potato samples were entered in the Russet class at the Royal Winter Fair, Toronto. A sample from the Rainier district was awarded first over entries from all provinces.

Field Days were held at Edmonton and Brooks, at which production methods, diseases and sprinkler irrigation were discussed. Inspection tours were made to see field practices of successful growers. From 50 to 75 farmers participated at each point. The Potato Production Improvement Committee initiated the Field Day at Brooks.

A bulletin entitled "A Guide To Potato Production Under Irrigation In Alberta," compiled by the Potato Production Improvement Committee was printed by this Branch and distributed to 1,200 growers.

## POTATO FERTILIZER TRIALS

Potato fertilizer trials were laid out by the Branch at Edmonton, Peers, Edson and Claresholm to determine the effectiveness of fertilizers under dry land conditions. The fertilizer used was 11-48-0, applied at rates of 100 lbs. and 200 lbs. per acre. Although results were somewhat varied and not too conclusive there was an indication that 100 lbs. of fertilizer per acre on potatoes would be an economical application. Work on this project is expected to be continued.

## POTATO INSPECTION FOR GRADES

In co-operation with the Dominion Department of Agriculture seven inspectors were employed to enforce the regulations of the Alberta Vege-

tables Sales Act—3 at Lethbridge, 1 at Calgary, 1 at Brooks and 2 at Edmonton. Ninety-two detention notices were issued where grades were not maintained or other regulations violated.

### INDEX FOUNDATION SEED POTATOES

The service of indexing Foundation Seed Potatoes was continued jointly by the Field Crops Branch, University of Alberta and the Dominion Seed Potato Certification Service. Nine hundred and eight tubers were greenhouse tested or disease for growers. Of tubers tested 533 or 54.5% qualified as suitable for production of indexed foundation stock.

### OCEANSIDE SEED POTATO TESTS

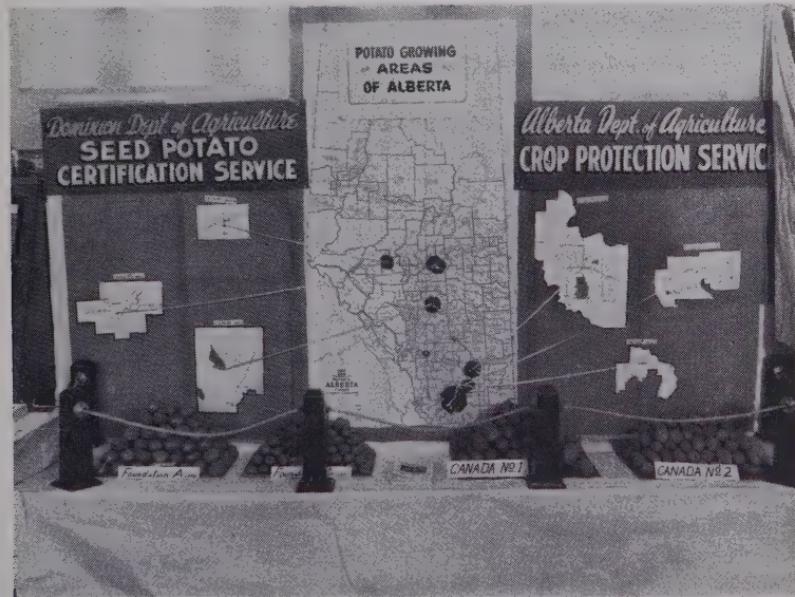
For the fourth year in succession, the Department arranged for land at Oceanside, California, on which growers tested seed potatoes. Buyers from the United States in an effort to obtain disease free seed frequently purchased their requirements on results of the Oceanside reports.

Alberta samples were relatively free of all major diseases—24 samples were free from all diseases and 5 samples showed only a trace of leaf roll.

This fall 29 samples were again submitted to Oceanside. One-half acre of land was rented for \$75.00. Each grower had paid a \$5.00 fee per sample for this service; the Department assumed all transportation charges and other costs relative to the project.

### SEED TREATMENT

A survey of seed treatment practices indicated that there was approximately 7,000 mechanical treaters in operation in Alberta. Of these 155 were available for custom work.



One of the displays used at Short Courses showing potato areas in Alberta as well as potato grades.

Seed drill surveys conducted by this Branch indicate that formaldehyde is still used by many farmers to treat seed grain. Of the 85 samples of barley selected from seed drills in the Municipalities of Eagle, Lamont and Leduc, 42 were treated with formaldehyde, 22 with Coresan, 15 with Leytosan and 6 were untreated.

Seed grain treated with five different fungicides was planted at Leduc and Edmonton with the object of demonstrating and comparing their effectiveness. Because germination and growth on plots were very erratic due to weather conditions plots had to be abandoned.

### MISCELLANEOUS

A Crop Protection Display in conjunction with the Dominion Plant Protection Service was set up at Calgary, Lethbridge, Medicine Hat and Brooks during the Short Courses at those points. Potato grading and grasshopper control were features of this display. Five hundred and forty-two people were interviewed in connection with the featured subjects.

There were 216 insect and disease specimens submitted for identification.

### ACKNOWLEDGMENT

Sincere appreciation and grateful acknowledgment is made to Pathologists and Entomologists of the University of Alberta and the Dominion Department of Agriculture for their assistance and information in planning and conducting programs for the control of plant diseases and insect pests in Alberta.

## HORTICULTURE

P. D. McCalla

### TREE PLANTING PROGRAM

In 1950 the farmers of Alberta planted 1,125,678 trees. Of these 1,032,972 were obtained from the Dominion Forest Nursery Station, Indian Head; 28,878 trees and 63,825 cuttings from the Forest Nursery Station at Oliver, and several thousand poplar and willow cuttings from the Provincial Horticulture Station, Brooks.

Because of the very dry spring and early summer a fairly high percentage of cuttings did not survive. However in the case of the trees planted, 70-75% lived, even though conditions at the time of planting were not always ideal.

The survival of trees planted in 1950 is not too encouraging, and the reasons for losses can be attributed mainly to dry soil in the early spring period. Where trees were planted on well prepared land the survival was more satisfactory. In too many cases immediate enthusiasm for planting is not maintained for care and attention afterwards. Some farmers have planted in stubble or on other land too dry to expect satisfactory survival. To have poor stands of trees discourages not only the farmer who planted them, but others aware of the results.

It cannot be over-emphasized that well prepared land is essential and it must be our obligation to see that trees are made available only to farmers who have suitably prepared land and have sufficient interest to ensure survival.

The two Government tree planters were used again for demonstration purposes in the Red Deer, Innisfail, Edmonton, Ryley, Camrose and Berwyn districts. A total of 165,795 trees was planted. Of interest are the varieties of trees that were planted with the mechanical planters: Caragana, 116,610; Manitoba Maple, 18,575; Poplar, 14,220; Willow, 9,850; American Elm, 3,150; Green Ash, 1,525; Evergreens, 1,440; May Day, 325, and Ginnalian Maple, 100.

Horticultural topics were discussed at ten Short Course Meetings. Besides these meetings arranged by District Agriculturists a large number of rural gatherings were held. The subjects discussed included fruit and vegetable growing in Alberta; tree planting, and farmstead planning and planting. Several talks were also given to city and town meetings on landscaping the home grounds. During late summer and early autumn the annual horticultural exhibitions and shows were held. One of the most encouraging features of these shows, especially in the smaller centres, was the number and quality of entries, particularly in the vegetable and flower classes.

Most of the commercial nurseries of the province were visited during 1950 in co-operation with the inspector of the Dominion Department of Agriculture. This inspection was carried out primarily to check new plant material imported into Alberta. Emphasis was placed on locating either new insects or diseases that might have gained entry on this material. While several suspicious insects were observed, after further examination all nurseries were given a clean bill of health. It is hoped that in 1951 it will be possible to extend this service in order to check that all plant material being sold by commercial nurseries is correctly named and classified.

Two horticultural bulletins were revised and issued in 1950. The popular leaflet, "Recommended Horticultural Varieties and Zonation Map for Alberta," was completely re-edited and several new features added, and issued under the title, "Alberta Horticultural Guide". The Farmstead Planning bulletin, first issued in 1946, was revised and the second edition published in 1950.

## DEMONSTRATION ORCHARDS

During 1950 it was possible to visit for the first time in several years many of the demonstration orchards. In the majority of cases these are thriving, although it was evident in nearly all orchards visited that some direction was needed in order that proper pruning practices might be carried out. All the owners of demonstration orchards were contacted by letter and asked to report on the general condition of their orchards, as well as on the behaviour of individual varieties. Information from these demonstrations will indicate the most suitable varieties for particular locations in the province. This information will also be of particular value to those doing research work in tree fruits for the prairies. During the year eight were discarded, due in most cases to the fact that the original owner had left the farm and the new occupants were not interested. Ten new ones were planted in 1950, making a total of eighty-four active demonstration orchards at the end of the year. Besides the setting out of the ten new orchards, trees were supplied to several orchards established at an earlier date.

## PROVINCIAL HORTICULTURAL ASSOCIATION

In 1950 real progress was made towards the formation of a Provincial Horticultural Association. Two meetings were held by the temporary

Committee, the first in August and the second in November. A constitution was prepared and is now undergoing final revision before proceeding with formal application for incorporation. This Committee feels that this Association will play a valuable part in assisting and encouraging the further development of horticulture in Alberta.

### FARMSTEAD PLANNING

Requests for this service were numerous. It was possible to visit several of the District Agriculturists' areas and assist interested farmers in planning their farmsteads. In many instances the applicants were intending to completely rebuild their farmsteads in a new location, and were therefore particularly anxious that the new layout should be as efficient and practical as possible. An excellent start has been made by these farmers and further assistance will be given them as the occasion demands.

It was not possible to draw detailed plans for all applicants, but useful suggestions for improving the farmstead were made to all those who sent in a plan of their farmstead.

It is anticipated that requests for assistance under this service will be increased because of the extreme interest shown by the rural population throughout the province in improving their living and working conditions.

## REPORT OF THE LIVE STOCK BRANCH

W. H. T. Mead, Live Stock Commissioner.

I. A. Coles, Live Stock Supervisor.

A. J. Charnetski, Live Stock Supervisor.

R. J. McKnight, Artificial Breeding Laboratory, Olds.

### REPORT OF I. A. COLES Live Stock Supervisor (Cattle)

Cattle came through the winter in good condition.

Except for the extreme southern part of the Province and the Peace River area, pastures were very poor until the end of June and stock failed to make the usual early gains on pasture. Pasture and cattle condition improved rapidly following general rains during the latter part of June.

Cattle entered the winter in good condition.

Fodder supplies are ample in most districts, but early fall frosts in many areas resulted in low quality feed grains. In the east central part of the Province, where harvest was not completed, there is an immediate shortage of feed grains.

Cattle marketings for the year through Public Stock Yards and Packing Plants are about 3.4% lower than last year.

The demand and prices for good pure bred breeding stock continues strong.

The Canadian Freight Association (Western Lines) Tariff No. 117C providing for reduced rates and special arrangements on Live Stock for Exhibition purposes expired February 15th.

The Alberta Stockyards Company Limited opened a Live Stock Exchange at Lethbridge on January 3rd which greatly facilitated the movement of Live Stock in the southern part of the Province.

Selling cattle by auction which was instituted at Calgary, Lethbridge and Edmonton Stock Yards during the year, has proved very popular and at the time of writing, the majority of cattle are being sold in this manner.

Market cattle prices were reduced by approximately \$2.00 cwt. during the first week of October resulting partly from the removal, on October 2nd, of the fixed rate of exchange on the Canadian Dollar, but recovered rapidly due to local and export demand.

The United States demand for Canadian cattle remained very active throughout the year, particularly for good feeder cattle.

At the sixth annual sale of Shorthorn bulls held on May 9th by Claude Gallinger, thirty-five bulls sold for an average of \$1,674.00. The top bull sold for ten thousand dollars to Messrs. Geo. and Elden McLachlan of Everat, Michigan, and Robert McFarlane, Grand Rapids, Michigan, which was the highest price paid for any Shorthorn bull sold in Canada, at a breeder's annual production sale offering.

A total of 1,162 bulls were sold at the 50th Annual Calgary Bull Sale for an average price of \$540.55, which is the highest number of bulls

and the second highest average price since the Calgary Bull Sale was inaugurated in 1901.

R. H. Houghan of Hanford, California, paid \$5,000.00 for the Hereford bull "Pine Coulee Royal Domino 23rd"—249136—bred by J. M. Campbell & Son, Stavely. J. L. Bohannon, Garfield, paid \$5,000.00 for the Hereford bull "Model Baca Triumph Domino"—248244—bred by Wright & Bond, Irricana. Harold Gulien, White Fox, Saskatchewan, paid \$2,500.00 for the Aberdeen Angus bull "Woodlawn Blackcap 34th"—97852—bred by Roy Ballhorn, Wetaskiwin. Skodopole Bros., Botha, paid \$3,000.00 for the Shorthorn Bull "Melbar Norseman Barrage"—310158—bred by Wm. Melnyk, Chipman, Alberta.

At the United Kingdom Foundation Breeding Stock Sale held at Brandon, Manitoba, on October 21st, in aid of the Red River Valley Flood Relief Fund, Alberta breeders purchased one Shorthorn bull, 5 Shorthorn females, 3 Aberdeen Angus females, one Hereford female, one Red Poll bull, one Red Poll female, one Ayrshire female—six Suffolk ewes, one English large white boar and three English large white sows. This stock had all been carefully selected in United Kingdom herds and is expected to make a worthy contribution to the improvement of Alberta live stock.

### THE CATTLE IMPROVEMENT POLICY (Pure Bred Sires)

Under the Cattle Improvement Policy, Pure Bred Sires are placed with commercial breeders at reduced prices whereby the Department of Agriculture contributes ten per cent of the cost of the sires with a maximum of forty dollars on each sire, in addition to the freight charges to the applicant's nearest railway station. Each farmer, provided he is not a pure bred breeder is entitled to one Pure Bred Sire through this Policy. During the year 249 bulls were placed through this Policy comprising 125 Herefords, 77 Shorthorns, 24 Aberdeen Angus, 13 Holsteins, 7 Red Polls, 2 Jersey and 1 Ayrshire.

### THE LIVE STOCK LISTING BUREAU

Under this Policy, pure bred breeding stock, male and female, is placed with Pure Bred breeders and others not entitled to come under the Cattle Improvement Policy. There is no financial assistance under this Policy. During the year twenty-two bulls and twelve females were placed through this Policy.

### AUCTION SALES OF PURE BRED CATTLE

#### CALGARY BULL SALE:

	1948		1949		1950	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn .....	171	\$372.78	172	\$529.00	219	\$442.76
Angus .....	109	395.41	145	510.17	171	424.30
Hereford .....	599	512.61	685	693.66	772	594.03
TOTAL ALL BREEDS	879	\$470.87	1,002	\$638.99	1,162	\$540.55

#### EDMONTON BULL SALE:

	1948		1949		1950	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn .....	69	\$321.59	94	\$435.10	93	\$404.46
Angus .....	6	295.00	12	346.66	20	328.75
Hereford .....	55	340.82	62	541.98	118	481.35
TOTAL ALL BREEDS	130	\$333.11	168	\$468.21	231	\$411.21

## LACOMBE BULL SALE:

	1948		1949		1950	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn .....	99	\$249.00	90	\$377.00	145	\$311.89
Angus .....	52	273.00	62	448.34	127	372.67
Hereford .....	120	312.00	125	494.32	229	376.00
TOTAL ALL BREEDS	271	\$281.46	277	\$446.01	501	\$356.60

## LLOYDMINSTER BULL SALE:

	1948		1949		1950	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn .....	58	\$203.53	35	\$349.70	36	\$336.81
Angus .....			1	290.00		
Hereford .....	64	365.59	59	517.29	78	455.13
TOTAL ALL BREEDS	122	\$285.54	95	\$453.15	114	\$413.77

## CAMROSE BULL SALE:

	1948		1949		1950	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn .....	21	\$382.14	21	\$264.52	29	\$272.93
Angus .....			1	180.00	1	180.00
Hereford .....	13	389.23	31	338.70	32	327.65
TOTAL ALL BREEDS	34	\$353.97	53	\$206.32	62	\$299.67

## CALGARY FALL FEMALE SALE:

	No. Sold	Av. Price
Shorthorn .....	33	\$451.21
Angus .....	45	439.33
Hereford .....	34	347.94
TOTAL ALL BREEDS .....	112	\$415.09

REPORT OF THE ARTIFICIAL INSEMINATION WORK CONDUCTED  
BY R. J. McKNIGHT

The Artificial Breeding work for 1950 followed the pattern set in the last six months of 1949.

Service was provided to 41 breeders of grade Holsteins in the Olds district. A total of 156 cows were inseminated under this plan with semen from the bulls "Sovereign Masterpiece"—198229 and "Glenafnton Clipper"—216609. One hundred and forty-three of these bred to Sovereign Masterpiece and thirteen to Glenafnton Clipper.

There were 24 breeders with a total of 64 cows who took advantage of this plan in the six months of 1949.

The service to breeders of registered Holstein-Friesians was provided from two bulls, namely "Sovereign Masterpiece"—198228— and "Glenafnton Clipper"—216609.

The bull Glenafnton Clipper was bought from J. J. E. MacCague of Alliston, Ontario.

Another young bull "Glenafnton Escort"—223304—was also purchased and shipped here from J. J. E. MacCague. As yet this bull has not been brought into service.

The following table will show the volume of breeding under the Pure-Bred plan.

	1944	1945	1946	1947	1948	1949	1950
No. of Herds .....	16	48	58	63	83	92	93
No. of Cows .....	108	247	317	407	365	419	474

**DEPARTMENT OF AGRICULTURE**

Of these 474 cows, 422 were bred to Sovereign Masterpiece and 52 to Glenafton Clipper.

For the full year under both plans, a total of 630 cows were bred artificially. 565 to Sovereign Masterpiece and 65 to Glenafton Clipper.

**DAIRY HEIFER CALF CLUB POLICY**

During the year this Branch arranged for the pick up of dairy heifer calves from dairymen in the Edmonton milk shed for shipment to different junior dairy clubs. A total of 103 calves were procured as compared to 220 calves during 1949. The demand for calves far exceeded the supply as many private buyers were offering considerable more for day old calves than the price set by the clubs. While the price paid for calves was increased during August, the response was slight in that no more than the normal seasonal increase of calves were available. At the end of the year orders were on hand from a number of clubs for which calves had not been obtained.

**COMMUNITY AUCTION SALES**

Selling cattle direct from the producers to feeders or processors by means of community auction sales has proven popular over a period of years, and was continued at a number of points in the province this year. The main sales agency was the Community Auction Sales Limited with headquarters at Pincher Creek. This organization held approximately 45 sales at 10 different points. In addition, sales were held by independent organizations at Walsh, Medicine Hat, Brooks, Cadogan and Lea Park. A total of 19,610 head of cattle were sold through all community sales compared to 32,265 head sold in this manner in 1949. Some of this reduction may be attributed to the selling by auction on the Lethbridge and Calgary Stock Yards.

**REPORT OF A. J. CHARNETSKI**

Live Stock Supervisor (Sheep and Swine)

**SWINE**

Despite feed shortages in the areas naturally suited to swine production, Alberta swine population increased in the past year by approximately 10% over 1949. This increase was registered mainly among farmers because of wide differences between prices farmers received for their coarse grains from the trade, and the ex elevator prices to the hog feeders operating feedlots. Many feeders were forced to either curtail or cease operations.

The 1950 Bacon Agreement with Britain was drastically reduced being only for 60 million pounds at a price of \$29.00 per 100 pounds Wiltshires basis seaboard. In view of this low price the Dominion Government provided a subsidy of \$3.50 per 100 pound on export Wiltshires. A further subsidy of \$1.25 per 100 pounds was granted on October 2nd. This makes a total of \$33.75 per 100 pounds Wiltshires at the seaboard, and in effect, acts as a floor on the price market of hogs, theoretically the Edmonton price of Grade A hogs should not drop below \$24.50 per 100 pounds dressed weight, a 200 pound live hog yields approximately 125 pounds of Wiltshire. It is doubtful if the 1950 (Canadian) bacon export will exceed 35 million pounds. Two main factors are responsible for this situation; one is decrease in hog production due to feed shortage resulting in high feed prices and another is due to extremely high beef prices created by cattle exports to the U.S.A. thus forcing many Canadians to resort to higher pork consumption. This keen domestic demand

has kept hog prices well above the export price levels. The future of the 1951 bacon agreement is not clear at the present time.

Hog prices fluctuated widely during the year. Grade A hogs at Edmonton plants varied from a low of \$26.00 in February to a high of \$34.50 in August. Calgary prices were \$23.75 in January and \$35.00 in August.

The quality of Alberta market hogs has improved slightly. In 1949, 22% of Alberta hogs graded A; in 1950 a strong 24%.

Demand for pure bred breeding stock was lukewarm during the early part of the year, however, heavy frost damage to growing crops caused a profound change in this connection. Commencing with early fall, the demand for breeding stock began to increase. At the end of the year the supply was completely exhausted.

Swine placements during 1950 included 97 Yorkshires and 22 Tamworth boars as well as eight gilts under the policy.

This office has given considerable time to matters such as herd culling, feeding problems and investigations pertaining hereto; housing; swine management; lectures to Agricultural students; judging at the various Agricultural Fairs; Regional Farm planning; Conferences. There were 35 general live stock meetings held during the year with an average attendance of 62 adults.

### DOMINION PROVINCIAL BROOD SOW POLICY

This Policy is operated jointly by the Dominion and Provincial Departments of Agriculture. It remained inoperative during the past year for the reason that there was no great demand for commercial gilts. It has been the policy of this office to encourage local selection of good commercial gilts for breeding purposes and thus save shipping costs as well as reduce the disease factor to the minimum.

### SWINE IMPROVEMENT POLICY

For reason heretofore stated, demand for boars under the Policy in question was not good during the early part of the year. However, demand increased sharply in November and December. If the British Bacon contract does not materialize in the near future this demand is expected to drop off, as export prices of Wiltshires at \$29.00 per cwt. basis seaboard is too low compared to the current feed prices.

The placement of swine under the Swine Improvement Policy for the years 1941 to 1950 inclusive, including those who did not qualify for pre-payment of shipping charges and obtained animals under the Live Stock Listing Bureau are tabulated hereunder:

Year	Live Stock Gilts	Listing Bureau Boars	Improvement Policy Boars	Total Boars
1941 .....			207	207
1942 .....	24	10	251	261
1943 .....	81	50	362	412
1944 .....	9	15	180	195
1945 .....	26	15	187	202
1946 .....	36	17	200	217
1947 .....	50	5	190	195
1948 .....	22	14	120	134
1949 .....	19	20	145	165
1950 .....	8	4	119	123

Statistical information on various phases of swine production and swine sales may be found following the general Live Stock Report.

## SHEEP

Farmers interested in sheep production have shown greater interest in the past year. There were a number of inquiries for the purchase of grade breeding ewes, unfortunately too many of the prospective purchasers were too late to take advantage of early ewe sales from some of the larger bands in southern Alberta, consequently these older but still useful ewes were quickly picked up by the United States buyers.

American buyers operated throughout the southern Alberta feed-lots early in March and purchased thousands of feedlot ewe lambs for breeding purposes at higher prices than Alberta sheepmen were prepared to pay for them. Recent reports indicate that during December, forty-seven carloads of ewe lambs were purchased at around thirty-two and one-half cents per pound for shipment to the U.S.A. to build up breeding flocks.

It is reported that finer Canadian raw wool is likely to bring over 60 cents per pound, this coupled with attractive lamb prices makes sheep production very profitable. Good Handyweight lamb prices ranged from \$20.00 to \$28.00 per cwt. The bulk of feeder lambs were going into the feedlots at \$25.00 to \$27.00 per cwt. Feeder ewes at \$10.00 to \$12.00 per head.

The export of pure bred and grade sheep from Alberta to the U.S. continued at a high rate at most satisfactory prices.

Sheep statistics in regard to population, export, domestic pure bred auction sales, values, etc., is reported at the conclusion of the general Live Stock Report. In instances where figures on Alberta basis are not available, Dominion figures are given.

The Alberta Wool Grading Regulations were prepared and passed in spring of 1949. The purpose of these regulations was to provide for the grading of wool by the graders of the Federal Marketing Services. The regulations in question were made operative with the handling of the 1950 wool clip. All wool buyers, wool collectors in Alberta and warehouses handling Alberta wool clips are licensed by the Alberta Department of Agriculture. Considerable time was spent by this office in connection with this work.

The Department operates the Sheep Improvement Policy whereby eligible applicants may obtain pure bred rams at cost including pre-payment of shipping charges. Those who do not qualify may obtain rams or ewes under the Live Stock Listing Bureau.

Due to heavy sheep depopulation and disbanding of smaller farm flocks, ram placement was smaller than in 1949.

The following table indicates sheep placement in Alberta under the Sheep Improvement Policy and the Live Stock Listing Bureau.

Year	Live Stock Ewes	Listing Bureau Rams	Improvement Policy Rams	Total Rams
1941 .....			69	69
1942 .....	11	14	81	95
1943 .....	4	9	26	35
1944 .....	11	3	31	35
1945 .....	4		25	25
1946 .....	5	2	45	47
1947 .....	52	1	39	40
1948 .....			28	28
1949 .....		3	22	25
1950 .....			21	21

## HORSES

Horse values continued to decline and quality of horses offered was also lower than in previous years. Spring sales of horses were held at Calgary, Lacombe, Stettler and Lloydminster. A total of 1,865 were sold at these sales with an average selling price of \$49.50 per head. This compares to 1949 figures of 1,668 horses sold at an average of \$69.38 per head. The bulk of horses sold went to the meat trade for animal foods and export for human food. Additional contracts for animal foods were taken by the U.S. market. The Horse Co-operative Marketing Association Limited slaughtered approximately 13,000 head of horses as compared to approximately 7,000 head in 1949.

## STALLION ENROLMENT

Very little interest was evidenced in horse breeding as reflected through stallion enrolment figures for 1950. Enrolments indicated greater interest in the breeding of light horses.

Breed	Enrolled	Inspected	Class "A"	Class "B"	Disqualified
American Saddle .....	7	1	1		
Arabian .....	2				
Belgians .....	5				
Clydesdales .....	4				
Hackney .....	1				
Palomino .....	12	7	7		
Percherons .....	21	5	5		
Standard Bred .....	1				
Tennessee Walking Horse .....	1				
Thoroughbreds .....	26	5	2	3	
<b>TOTALS</b> .....	<b>80</b>	<b>18</b>	<b>15</b>	<b>3</b>	

This table shows a total of 80 stallions enrolled as compared to 82 in 1949, but the number of heavy breed stallions was reduced from 49 to 30.

## ROYAL WINTER FAIR, TORONTO

An exhibit of Alberta live stock totalling 9 carloads made up of 30 horses, 97 cattle, 25 sheep and 7 pigs owned by 42 exhibitors was selected through the direction of the Alberta Live Stock Board and shipped to the 22nd Royal Winter Fair which was held November 14th to 22nd.

The shipment was handled by the Canadian National Railways and a satisfactory run was made both ways. The change in Exhibition Freight rates required payment of freight both ways whereas in previous years under the special exhibition rate, the carrier returned the live stock free of charge. Freight charges to Toronto and back were paid as follows: 75% by the Dominion Department of Agriculture and 25% by the Alberta Department. In addition the Alberta Department paid decking and partitioning costs and feed costs from points of assembly until the stock was returned to points of assembly. L. M. Rye of North Edmonton acted as supervisor of the entire shipment.

The following awards were received on exhibits:

	Horses	Cattle	Sheep	Swine	Total
Grand Champion .....		2			2
Reserve Grand Champion .....	4	2			6
Senior Champion .....	1				1
Reserve Senior Champion .....	2				2
Junior Champion .....	2	2			4
Reserve Junior Champion .....		1			1
Championships .....	2	5			7
Reserve Champions .....	3	1	1		5
1st Prize .....	6	17	8		26
2nd Prize .....	6	12	3		15
3rd Prize .....	6	11	2		19
Other Prizes .....	14	53	7	7	81
<b>TOTAL</b> .....	<b>46</b>	<b>106</b>	<b>16</b>	<b>7</b>	<b>169</b>

## DEPARTMENT OF AGRICULTURE

The grand champion awards were won as follows: Grand Champion fat steer was won by the University of Alberta with a Shorthorn steer that was bred by Claude Gallinger of Edmonton. The grand champion Hereford female was won by Arthur Crawford-Frost of Nanton with a heifer of his own breeding. Ed. F. Noad of Claresholm fed and exhibited the reserve grand champion fat steer with a Hereford as well as the reserve champion Angus steer, to continue his consistent performance since starting to show at the Royal in 1947. Also of special interest is the champion fat steer carload owned by the McIntyre Ranching Company of Lethbridge.

## LIVE STOCK FEEDER ASSOCIATIONS

The number of Associations operating was reduced from 14 in 1949 to 10 during 1950. This came about by the amalgamation of Lethbridge, Red Label and U.I.D. Associations with the Lethbridge Central Feeders' Association Limited, which organization operates independently of any Government Guarantee. The Vauxhall-Albion Ridge Association did not operate during 1949-50, but a number of their members fed through the Lethbridge Central. Vauxhall Feeders was reorganized in the fall of 1950 as an independent association. One new association, Kneehill Valley Feeders' Association Limited was organized in the fall of 1950 for the 1950-51 season. The general easing of credit resulting from profitable feeding operations has resulted in some cases in decreased demand for guaranteed credit.

Cattle and lamb feeding operations were exceedingly profitable due to the uncommonly wide margin between the cost of feeder live stock in the fall of 1949 and the sale of finished stock in the spring and summer of 1950.

The irrigation districts were once again the heavy feeding points, but due to the U.S. demand for good southern Alberta cattle, were forced to look more to the Calgary, Edmonton, Winnipeg and Moose Jaw markets for feeder live stock.

## VOLUME OF OPERATIONS OF ALBERTA FEEDERS' ASSOCIATIONS DURING THE 1949-50 SEASON

Association	Address	Cost of Animals	Cattle	Sheep	No. of Members Feeding
Battle River Live Stock Ass'n. Ltd. ....	Camrose	\$65,831.65	636	.....	21
Bow Valley Live Stock Feeders' Ass'n. Ltd. ....	Brooks	94,795.49	692	1,469	34
Carstairs Live Stock Feeders' Ass'n. Ltd. ....	Carstairs	4,844.00	48	.....	3
Central Alberta Live Stock Feeders' Ass'n. Ltd. ....	Lacombe	47,982.70	433	208	20
Innisfail Live Stock Feeders' Ass'n. Ltd. ....	Innisfail	106,281.73	1,022	.....	48
Raymond-Magrath Live Stock Feeders' Ass'n. Ltd. ....	Magrath	54,750.70	352	2,493	20
Taber Live Stock Feeders' Ass'n. Ltd. ....	Taber	58,499.14	285	2,055	18
South Slope Live Stock Feeders' Ass'n. Ltd. ....	Brooks	98,926.79	608	2,723	23
Vermilion Live Stock Feeders' Ass'n. Ltd. ....	Vermilion	67,079.47	653	.....	27
Wainwright-Edgerton-Chauvin Live Stock Feeders' Ass'n. Ltd. Edgerton		23,766.75	254	.....	13
		\$622,758.42	4,978	8,948	237

## THE STOCK INSPECTION ACT

Stock Inspection continued as a major project of the Live Stock Branch. Inspection staffs were maintained at Edmonton, Calgary, Leth-

bridge and Winnipeg with Deputy inspectors working from Pincher Creek and Lloydminster. A number of appointments were made at various R.C.M. Police detachments from which valuable aid was rendered in those areas.

The year was marked by the retirement of three veteran inspectors, namely, Dave E. Wheatcroft of Calgary, Leo S. Hester of Edmonton and Deputy Stock Inspector Fred Forster of Pincher Creek.

Inspections for the year totalled 691,870 head. This is a decrease of 3.5% from 1949 inspections. As in the previous year an exceptionally heavy delivery of cattle occurred during the summer. This was due to the exceptionally high prices prevailing at that time.

Service from the Branch in investigating proper ownership of strays was continuous. Carelessness and error in the application of registered brands, the continued scattered use of unregistered brands, and carelessness in declaring brands by shippers continues to cause inconvenience to inspectors and shippers.

The change to auction selling at the main markets coupled with the narrow margin of stock on hand at plants at any given time has increased the difficulty of providing inspection service.

### THE BRAND ACT

Midway in the year, Mr. W. F. Logan who had rendered valuable service as Brand Recorder, transferred to another Branch and was replaced by Mr. H. S. McIntyre.

One thousand two hundred and ninety-seven new brands were recorded. This number was made up of 1,191 cattle, 101 horse, 1 fox, 3 sheep and 1 poultry. Two hundred and twenty-five transfers were registered. There were 5,056 brands renewed (4,142 cattle, 983 horse, 1 fox, 2 sheep, 2 poultry). Strays, searches and certified extracts numbered 339.

The approximate number of brands in good standing are as follows:

Year	1948	1949	1950
Cattle .....	19,894	21,040	22,231
Horse .....	6,666	6,793	6,800
Poultry .....	27	31	26
Sheep .....	23	23	18
Fox .....	41	48	17

The number of new registrations has made it difficult to keep inspectors supplied with supplemental brand registrations and indicates that the publishing of a new edition of the Brand Book may soon be necessary.

Butcher and hide dealer licenses issued numbered 545.

### THE ALBERTA LIVE STOCK AND LIVE STOCK PRODUCTS ACT

During the year a total of 780 live stock dealer licenses were issued. These were made up of 136 agents and 644 dealers.

One inspector operating under this Act was well occupied. Some convictions were obtained and some licenses cancelled.

### DOMESTIC ANIMALS (UNORGANIZED TERRITORY) ACT

Some new pound districts were established and a number of alterations made to existing pound districts.

## DEPARTMENT OF AGRICULTURE

The main difficulty in pound districts continued to be the exceedingly low value of horses which resulted in the lack of interest by owners in the horses they have running at large and the non-redemption of those horses when impounded.

**PURE BRED SIRE AREA ACT**

While continued interest was shown in possibilities provided for under this Act, no specific area completed a petition for a Pure Bred Sire Area.

Excellent co-operation and assistance from members of the R.C.M. Police continued as in former years.

Additional assistance was obtained from the Highway Traffic Board Inspectors in enforcing regulations relating to the movement of live stock by truck.

Assistance and co-operation from these two groups, as well as from sale organizations, Breed Associations and the live stock trade in general, is greatly appreciated and hereby acknowledged.

**STATISTICAL INFORMATION RELATIVE TO  
LIVESTOCK REPORT**

June survey of the number of Cattle on Alberta Farms for the past five years is as follows:

Year	No. of Head
1946 .....	1,768,100
1947 .....	1,654,000
1948 .....	1,584,300
1949 .....	1,465,000
1950 .....	1,442,900

The decrease in numbers from 1949 is 22,100 head or 1.51%.

The official reports of the Dominion Department of Agriculture show for Alberta the following cattle and calf marketings and total value for 1946 to 1950 (inclusive):

Year	No. Cattle	Value	No. Calves	Value
1946 .....	494,137	\$47,664,500.00	100,513	\$2,880,700.00
1947 .....	423,154	46,123,786.00	87,185	2,571,085.00
1948 .....	531,988	75,341,245.83	118,240	5,063,642.71
1949 .....	526,958	80,624,000.00	126,089	6,304,000.00
1950 .....	473,354	92,458,000.00	137,721	12,000,000.00

**CATTLE AND CALF SHIPMENTS OUT OF THE PROVINCE**

	1946	1947	1948	1949	1950
British Columbia .....	91,717	102,924	103,193	102,883	89,258
Saskatchewan .....	23,068	12,734	12,248	6,633	4,249
Manitoba .....	37,796	27,197	33,186	30,188	19,623
Ontario .....	16,207	18,508	42,940	49,706	48,908
Quebec .....	31,207	24,627	37,522	36,759	20,889
Nova Scotia .....	33	375	34	...	28
New Brunswick .....	279	...	...	...	22
U.S.A. .....	7	150	72,402	80,342	115,060
Newfoundland .....	...	...	42	71	...
Prince Edward Island .....	...	56	5	...	...
	200,437	196,571	301,572	306,582	298,037

**SWINE**

TABLE 1.

**ALBERTA SWINE POPULATION—JUNE SURVEY**

1948 .....	792,200
1949 .....	847,100
1950 .....	809,700

TABLE 2.

**ALBERTA HOG GRADINGS FOR YEARS 1946-1950 INCL.**

	1946 %	1947 %	1948 %	1949 %	1950 %
Grade A .....	23.70	21.96	23.21	22.13	25.00
Grade B .....	56.75	54.30	57.12	57.22	56.32
Grade C .....	7.56	7.12	6.84	6.86	6.28
Light .....	0.69	0.92	1.03	0.95	1.40
Grade D .....	0.41	0.33	0.46	0.40	0.56
Heavy .....	2.80	3.48	2.94	2.92	2.03
Ex. Heavy .....	1.97	3.53	2.47	2.69	1.77
Injured .....	0.05	0.06	0.06	1.05	0.04
Rgl. ....	0.57	0.54	0.56	0.56	0.51
Stags .....	0.39	0.45	0.42	0.45	0.45
Sows .....	5.10	7.31	4.89	5.77	5.64

TABLE 3.

**EDMONTON SPRING SWINE SALE: (No. Sold and Average Price)**

	No. 1948	No. 1949	No. 1950
Yorkshire Gilts .....	123 \$78.96	130 \$99.24	44 \$109.25
Tamworth Gilts .....		2 90.00	2 91.25
Yorkshire Boars .....	26 77.30	48 70.73	33 90.84
Tamworth Boars .....		3 80.00	8 60.94

TABLE 4.

**EDMONTON FALL SWINE SALE: (No. Sold and Average Price)**

	No. 1948	No. 1949	No. 1950
Yorkshire Sows .....	148 878.07	196 \$68.52	141 \$72.63
Tamworth Sows .....	7 101.78	21 58.58	8 76.25
Yorkshire Boar .....	150 87.71	161 63.32	135 81.53
Tamworth Boars .....	5 84.50	6 92.50	23 80.67
	310 \$83.63	384 \$66.02	297 \$74.03

TABLE 5.

**CALGARY FALL SWINE SUMMARY**

SOWS	No. 1948	No. 1949	No. 1950
York. Oct.-Apr. ....	66 \$107.92	118 \$65.85	81 \$98.40
York. Prev. Oct. ....	4 151.25	16 81.87	3 106.66
Tam. Oct.-Apr. ....	8 96.25	16 58.91	18 76.56
Berk. Fem. ....		3 68.33	...
Female Total .....	78 \$108.94	153 \$66.84	102 94.61
BOARS			
York. Oct.-Apr. ....	75 \$133.43	66 \$77.08	94 \$93.03
York. Prev. Oct. ....	1 115.00		15 73.83
Tam. Oct.-Apr. ....	10 97.00	24 84.06	19 102.89
Tam. Prev. Oct. ....	1 82.50	1 70.00	1 80.00
Berk. Boar ....	6 95.00	4 73.75	3 99.17
Hamp. Boar ....		...	2 56.25
Boar Total .....	93 \$126.29	95 \$78.63	134 91.77
SWINE TOTAL .....	171 \$118.38	248 \$71.36	236 93.00

TABLE 6.

**TOP PRICES FOR BOARS AND SOWS—FALL SALES**

	Calgary 1948	1949	1950	Edmonton 1948	1949	1950
York. Boar .....	300.00	145.00	225.00	355.00	175.00	235.00
York. Sow .....	180.00	155.00	215.00	180.00	235.00	200.00
Tam. Boar .....	200.00	200.00	125.00	110.00	175.00	115.00
Tam. Sow .....	120.00	80.00	155.00	115.00	90.00	115.00
Berkshire Boar ....	125.00	82.50	105.00	...	...	...
Berkshire Sow ....		75.00	...	...	...	...

**SHEEP**

TABLE 2.

**ALBERTA SHEEP POPULATION—JUNE SURVEY**

1945 .....	974,900	1948 .....		448,600
1946 .....	666,800	1949 .....		441,800
1947 .....	613,800	1950 .....		414,500

TABLE 3.

**ALBERTA COMMERCIAL SHEEP MARKETING AND VALUES**

Year	Stock Yards	Plants	Direct Export	To		
				Country Points	Total	Value
1945 .....	75,556	196,836	56,562		328,954	\$2,921,112.00
1946 .....	83,515	214,574	1,475		299,564	2,917,800.00
1947 .....	84,952	202,560	1,671		289,183	3,053,772.48
1948 .....	49,117	143,268	23,347		215,732	3,063,531.85
1949 .....	45,941	91,177	28,032	7,162	172,312	2,969,056.98
1950 .....	36,520	59,283	68,323	4,051	168,177	3,745,302.00

Export of commercial sheep was not permitted in 1946 and 1947.

## DEPARTMENT OF AGRICULTURE

ALBERTA SWINE MARKETINGS, 1945-1950 (INCLUSIVE) BY GRADE  
AND PERCENT WITHIN EACH GRADE

	"A"	"B"**	"C"	"D"	Light	Heavy	Extra Heavy	"E"**	Sows	Total No.	Sales Value Total
1945—Number .....	529,663	1,067,375	138,365	6,836	13,670	43,938	28,714	18,158	99,395	1,946,114	52,895,379.00
% .....	27.20	54.80	7.10	0.35	0.70	2.25	1.47	0.94	5,10	100.00	
1946—Number .....	294,873	710,631	93,736	4,832	8,487	26,541	25,328	12,305	63,868	1,250,602	35,667,204.00
% .....	23.58	56.82	7.50	0.39	0.68	2.92	2.02	0.98	5,11	100.00	
1947—Number .....	242,720	600,174	78,648	3,720	10,072	38,665	38,975	11,662	80,686	1,105,222	37,621,756.88
% .....	21.96	54.30	7.12	0.33	0.92	3.48	3.53	1.05	7,31	100.00	
1948—Number .....	270,527	665,717	79,759	5,378	12,054	34,211	28,802	11,968	56,987	1,165,433	55,056,000.00
% .....	23.21	57.17	6.84	0.46	1.03	2.94	2.47	1.04	4,89	100.00	
1949—Number .....	204,624	529,200	63,414	3,702	8,752	26,989	24,912	9,697	53,427	924,717	44,533,403.01
% .....	22.16	57.22	6.86	0.40	0.95	2.92	2.69	1.05	5,78	100.00	
1950—Number .....	240,179	541,106	60,294	5,362	13,436	19,535	16,958	9,600	54,138	960,608	42,305,176.00
% .....	25.00	56.32	6.28	1.40	0.56	2.03	1.77	1.00	5,64	100.00	

"B"\*\* Include B1, B2 and B3.  
"E"\*\* Includes injured kidlings and stags.

## ALBERTA SHEEP MARKETINGS AND CLASSIFICATIONS

SWINE	Good Handy Weight			Common All Weight			Good Handt Weight			SHEEP			Grand Total Sheep and Lambs	
	Good	Handy	Weight	Good	Common	Bucks	Total	Good	Handt	Weight	Heavy	Common	Unclassified	Direct Export
1945—Number .....	188,162	3,651	29,076	2,380	233,269	.....	10,466	15,132	10,029	3,496	56,562	95,685	328,954	
% .....	80.6	1.6	16.8	1.0	1.0	.....	10.9	15.8	10.5	3.7	59.1	.....	.....	
1946—Number .....	209,420	10,560	25,255	2,777	247,952	.....	19,477	18,392	9,432	2,836	1,475	51,612	299,564	
% .....	84.5	4.2	10.2	1.1	1.1	.....	37.7	35.6	18.3	5.5	2.9	.....	.....	
1947—Number .....	191,064	6,164	24,706	2,535	224,469	.....	23,780	22,571	9,540	7,152	1,671	64,714	289,183	
% .....	85.1	2.7	11.0	1.1	1.1	.....	36.7	34.8	14.7	11.0	2.5	.....	.....	
1948—Number .....	129,028	2,608	4,756	2,314	138,735	18,036	16,140	7,487	4,987	23,347	69,747	215,732		
% .....	93.0	1.9	3.4	1.7	1.7	.....	25.7	23.1	10.7	7.1	3.4	.....	.....	
1949—Number .....	101,869	.....	7,601	2,302	111,772	15,134	.....	5,143	.....	28,032	48,309	160,081		
% .....	91.1	.....	6.9	2.0	2.0	.....	31.3	31.3	10.6	5.81	.....	.....	.....	
1950—Number .....	68,249	.....	13,623	* 2,085	83,957	7,921	.....	3,925	4,058	68,323	84,220	168,177		

\* Includes 6,167 feeders (also there were 17,668 inward moved sheep.)

TABLE 4.

## EXPORT OF PURE BRED SHEEP FROM ALBERTA TO U.S.A.

Year	No. of Head
1945 .....	1,061
1946 .....	1,124
1947 .....	1,938
1948 .....	1,453
1949 .....	998
1950 .....	1,197

TABLE 5.

## CALGARY SUMMER SALE OF STUD RAMS AND EWES

Year Sold	Year of Birth	Breed	No.	Price Av.	Top Price	No.	Price Av.	Top Price
1948	1947	Hampshire	1	\$60.00		2	\$42.50	\$50.00
1948	1948	Hampshire	3	75.83	\$105.00	...	...	...
1948	1949	Suffolk	8	129.08	250.00	8	117.20	210.00
1949	1949	Suffolk	9	137.50	345.00	9	83.61	200.00
1949	1948	Hampshire	1	700.00	700.00	3	40.83	50.00
1949	1949	Hampshire	...	...	...	1	32.50	32.50
1950	1949	Suffolk	6	210.00	350.00	10	100.00	205.00
1950	1950	Suffolk	16	186.25	675.00	10	142.50	350.00
1949	1949	Hampshire	1	65.00	65.00	...	...	...
1950	1950	Hampshire	4	76.25	115.00	2	50.00	50.00

TABLE 6.

## CALGARY PURE BRED SHEEP—FALL SALE

Breed	1948		1949		1950	
	No. Sold	Avg. Price	No. Sold	Avg. Price	No. Sold	Avg. Price
Hampshire Ewes (1 yr.) .....	46	\$22.61	46	\$33.38	25	\$46.64
Hampshire Ewes (L) .....	26	28.98	20	36.95	12	50.67
Suffolk Ewes (1 yr.) .....	99	55.16	111	29.29	19	95.00
Suffolk Ewes (L) .....	53	43.41	55	37.06	40	98.75
Southdown Ewes (1 yr.) .....	2	33.75	7	31.64	3	43.67
Southdown Ewes (L) .....	1	30.00	3	36.33	0	0
Cheviot Ewes .....	6	21.83	...	...	19	45.58
Rambouillet Ewes .....	...	...	6	19.00	...	...
	233	\$42.00	248	\$32.29	118	\$72.25

Breed	1948		1949		1950	
	No. Sold	Avg. Price	No. Sold	Avg. Price	No. Sold	Avg. Price
Hampshire Rams (1 yr.) .....	40	\$37.88	30	\$50.15	8	\$102.94
Hampshire Rams (L) .....	61	41.02	57	48.21	24	97.92
Suffolk Rams (1 yr.) .....	30	71.00	36	51.17	21	79.17
Suffolk Rams (L) .....	110	74.30	133	50.61	99	90.81
Corriedale Rams .....	...	...	9	63.06	2	100.00
Rambouillet Rams .....	...	...	...	...	...	...
Cheviot Rams .....	6	37.17	8	43.56	20	59.00
Southdown Rams (1 yr.) .....	10	52.50	4	33.75	7	45.00
Southdown Rams (L) .....	4	28.75	7	24.57	...	...
TOTAL .....	261	\$61.24	284	\$49.48	181	\$86.55
Grade Ewes .....	62	16.52	532	41.46	100	27.80

## DEPARTMENT OF AGRICULTURE

TABLE 7.

## EDMONTON PURE BRED SHEEP—FALL SALE

Breed	1948		1949		1950	
	No. Sold	Avg. Price	No. Sold	Avg. Price	No. Sold	Avg. Price
Suffolk Ewes .....	70	\$21.71	49	\$27.58	88	\$50.94
Oxford Ewes .....	12	18.33	1	27.50	2	25.00
Shropshire Ewes .....	...	...	96	38.77	...	...
Southdown Ewes.....	5	18.50	8	38.75	...	...
Cheviot Ewes .....	...	...	...	...	2	33.50
Hampshire Ewes .....	16	20.47	...	...	5	41.20
<b>TOTAL</b> .....	<b>103</b>	<b>\$27.77</b>	<b>154</b>	<b>\$35.13</b>	<b>97</b>	<b>\$49.55</b>

Breed	1948		1949		1950	
	No. Sold	Avg. Price	No. Sold	Avg. Price	No. Sold	Avg. Price
Cheviot Rams .....	...	\$ ...	7	\$33.93	12	\$34.79
Suffolk Rams .....	63	38.84	112	41.96	73	57.23
Oxford Rams .....	5	27.50	6	24.17	4	56.88
Shropshire Rams .....	...	...	...	...	...	...
Southdown Rams .....	2	26.25	1	25.00	...	...
Hampshire Rams .....	24	33.54	16	37.50	17	40.59
<b>TOTAL</b> .....	<b>104</b>	<b>\$33.10</b>	<b>296</b>	<b>\$37.56</b>	<b>106</b>	<b>\$52.00</b>
Grade Ewes .....	23	14.47				

TABLE 8.

## CANADIAN EXPORT OF SHEEP AND LAMBS

	To Great Britain No.	To Great Britain Value	To United States No.	To United States Value	Total Export* No.	Total Export* Value
1947 ..		5,666		\$108,752	6,048	\$186,938
1948 ..		51,407		805,434	51,909	815,407
1949 ..		40,863		890,715	41,410	897,800
1950 ..		87,140		1,939,558	87,648	1,952,132

\*Total include export to other countries.

TABLE 9.

## CANADIAN EXPORT OF MUTTON AND LAMB

	To Great Britain Lbs.	To Great Britain Value	To United States Lbs.	To United States Value	Total Export* Lbs.	Total Export* Value
1947 ..	3,608,800	\$687,540	200	\$ 50	4,568,700	\$ 977,763
1948 ..	1,569,000	269,703	2,784,500	1,125,181	5,056,100	1,645,934
1949 ..			3,601,100	1,551,822	3,955,900	1,709,109
1950 ..			2,665,800	1,346,555	2,760,700	1,402,215

\*Includes export to other countries.

## REPORT OF THE DAIRY BRANCH

D. H. McCallum, Dairy Commissioner  
L. M. Silcox, Supervisor, Dairy Factory Inspection  
J. B. Linneboe, Supervisor, Dairy Branch Laboratory  
R. P. Dixon, Supervisor, Dairy Cattle Improvement  
B. J. McBain, Supervisor, Dairy Cost Study  
L. H. Arnold, Supervisor, Frozen Food Locker Plants  
A. F. Bennett, Dairy Statistician

### GENERAL REVIEW

In spite of unfavourable pasture conditions, and a noticeable reduction in the number of milk cows, milk production showed a slight increase of 1.0 per cent. during 1950. Pastures for dairy cattle for the second successive year were very poor in the Northern and Central parts of the province until late in the season. The effect of unfavourable conditions in these areas is more noticeable as the bulk of the milk is produced north of Red Deer. Dairymen in the Edmonton district were again compelled to buy a portion of their hay supply from the irrigated sections of southern Alberta. The quality as well as the quantity of feed grains was greatly reduced as a result of early frosts in the month of August. The use of stubble fields for fall pasture is in most areas, a significant factor in feeding dairy cattle; however, a very wet fall delayed harvest and prevented the normal use of such fields for pasture. This was most noticeable in the east central part of Alberta where a considerable portion of the grain crop was snowed in and will not be threshed until the spring of 1951.

The average production per cow again showed a substantial increase which amounted to 199 lbs. of milk and 7 lbs. of butterfat. Lower prices for certain manufactured products, noticeably creamery butter which showed a price reduction of 4 to 5¢ per pound under 1949, were responsible for a drop of approximately \$1,000,000 in the total value of all dairy products. A substantial carryover of creamery butter into the new production year combined with an increasing use of substitutes were the principal factors in establishing the support price 4¢ below that of the previous year.

Greater use of milk in the fluid form caused a slight change in the utilization during the year. Not only were fluid sales increased but larger quantities were farm home consumed, and fed to live stock. The percentage used for manufacturing ice cream and cheddar cheese also showed a slight increase. Both creamery and farm dairy butter showed decreases.

The quality of dairy products was well maintained, in fact there was an increase in the percentage of first grade butter which is now the highest on record.

### PRODUCTION AND VALUES OF DAIRY PRODUCTS, 1950

Total milk production amounted to 1,688,183,000 pounds, while the factory value of all products, which includes the cost of manufacturing and processing, amounted to \$51,360,000.00. To illustrate the size and diversity of the industry in Alberta the following table on production and values has been included.

## (PRELIMINARY)

Product	Quantity	Milk Equivalent lbs.	% of Total Milk	Average Unit Price	Total Value
Creamery Butter lbs. ....	31,248,000	732,141,000	43.4	\$ .53	\$16,561,000
Farm Dairy Butter lbs. ....	6,947,000	162,768,000	9.6	.52	3,612,000
Cheddar Cheese lbs. ....	2,940,000	32,752,000	1.9	.35	1,029,000
Net increase in processing					93,000
Ice Cream "gals. ....	1,922,000	34,614,000	2.1	1.45	2,788,000
Misc. Factory Products ....		27,727,000	1.6	....	1,721,000
Milk and Cream fluid sales .. (including processing charges)		293,281,000	17.4	4.75	13,932,000
Milk and Cream Farm					
Home consumed ....		188,800,000	11.2	2.22	4,191,000
Milk Fed Farm Animals ....		216,100,000	12.8	2.22	4,797,000
Skimmilk and Buttermilk for human consumption lbs. ....	5,083,000	.....	....	1.20	61,000
Skimmilk and Buttermilk for animal feed etc. lbs. ....	845,544,000	.....	....	.80	2,536,000
Whey lbs. ....	24,589,000	.....	....	.16	39,000
Total		1,688,183,000	100.0		\$51,360,000

\* Mix converted to Ice Cream on basis of 100% overrun.

## ESTIMATED FARM INCOME FROM SALE OF DAIRY PRODUCTS, 1950

The farm income from the sale of dairy products during 1950 has been estimated at \$27,079,000.00. The following tabulation sets forth quantity, value, and form in which the products were marketed.

## (PRELIMINARY)

	Milk or Butterfat Pounds	Price	Value
Butterfat for Creamery Butter ....	25,623,000	\$ .541 per lb.	\$13,864,000
Milk and Butterfat for Ice Cream (milk basis) ....	34,614,000	2.26 per 100 lbs.	781,000
Farm Dairy Butter sold ....	453,000	.52 per lb.	235,000
Milk for Cheesemaking and Concentrating .....	60,479,000	2.47 per 100 lbs.	1,493,000
Milk and Cream for Fluid Consumption .....	293,281,000	3.65 per 100 lbs.	10,706,000
Total Income .....			\$27,079,000

## DAIRY MANUFACTURING

## CREAMERIES

92 creameries, one less than 1949, operated during the year. One plant was consolidated with another creamery at the same point, early in 1949.

The production of creamery butter was 31,248,098 pounds, a reduction of 2.3% under 1949. The average output per plant also showed a slight reduction and is now 339,653 pounds.

The Sangudo Creamery owned by W. Gilchrist was purchased by H. A. Smith and Associates on June 19. It now operates under the name Sangudo Creamery Limited.

## CHEESE FACTORIES

14 cheese factories operated during the year. This was the same number as in 1949. The production of cheese was 2,939,651 pounds, an increase of 5.7% over the previous year. The average output per plant was 209,975 pounds, which is slightly above that of 1949.

The cheese factory at Glen Park operated by the Woodland Dairy Company Ltd., was destroyed by fire on May 19th and was not rebuilt. Two other plants, namely Sunnyslope and Neapolis, were in operation only part of the year. Larger quantities of milk than in former years was transferred from cheese factories to milk distributing and concentrating plants, otherwise the production of cheese would have shown a larger increase.

Prices for cheese were quite satisfactory in relation to other manufactured dairy products for most of the year and in fact were about 8¢

above the price paid for cheese in central Canada (which was requisitioned to fill the British Contract) by the Dairy Products Board. During the fall months a few carlots of Alberta cheese were sold to Eastern Canada. This cheese arrived in excellent condition and reports indicated that the quality was very satisfactory.

## DAIRIES

The trend to supply safe pasteurized milk to the residents of smaller towns in Alberta continued with the result that 4 new dairies were put into operation. There are now 72 milk pasteurizing plants in Alberta.

The plants commencing milk pasteurization during 1950 were: Bashaw Creamery, Bashaw; Central Alberta Dairy Pool, Delburne; Nanton Creamery, Nanton; Dairy Dell, Picture Butte.

## QUALITY OF DAIRY PRODUCTS

There was an improvement in the quality of cream received at creameries during the year when an additional 3.0 per cent. qualified for the two top grades. This was accompanied with a corresponding decrease in first and second grades. Several leaflets dealing with specific defects in cream and how they could be avoided were published by the Dairy Branch and distributed to patrons through the creameries. Undoubtedly these leaflets were at least partly responsible for the improved quality. The percentage of cream in each grade for 1950 was as follows: Table 1.1, Special 56.3, First 39.4, Second 2.9, and Off Grade .3.

The wide spread between first and second grade cream prices established during 1949, due to a poor demand for undergraduate butter, continued throughout 1950. This spread was 14.5 cents between first and second grade and 19.5 cents between first and off grade.

Creamery butter quality again showed a slight improvement with 93.3 percent qualifying for first grade, which represents a new all time record for first grade. There was also an increase in the percentage scoring 93 points or over as 41 percent of the total make attained this high standard of quality.

The quality of Alberta cheese for the first time in several years showed a decrease which amounted to about 5 percent. on first grade. This drop in quality was confined to two factories but due to large outputs their effect on the provincial average was considerable. The percentage of cheese in each grade is as follows: First 84.9, Second 13.6, Third 1.3, and Below Third Grade .2.

Alberta factories made a most commendable showing during the year by winning a total of 182 prizes on butter and cheese exhibits to the leading Canadian Exhibitions. Inspectors of the Dairy Branch have encouraged factory workers to manufacture these exhibits. To assist in defraying expenses of exhibiting at the Royal Winter Fair, Toronto, regarded as Canada's show window for agricultural products, the Department of Agriculture paid the transportation charges on approved exhibits.

## CHECK WEIGHING OF BUTTER AND CHEESE

As in the previous year all butter purchased by the Dairy Products Board was check weighed into storage and again as it went into consumption channels. This policy increased the number of weight certificates issued.

A total of 21,934 boxes representing 11,220,948 pounds of butter were check weighed, compared to 12,133 boxes representing 5,326,732 pounds in 1949.

There were 150 boxes of cheese check weighed in shipments totalling 1,220 boxes.

### DIPLOMA COURSE IN DAIRYING

Due to lack of interest there was no Diploma Course in Dairying organized for 1950-51. Of the fourteen students which registered for the 1949-50 six months Diploma Course at the University of Alberta, twelve completed their studies. Four students were granted Diplomas while eight received Certificates for having fulfilled all the requirements. The Alberta Dairymen's Association Gold Medal for the highest standing in the Course was awarded to Patrick Dornan of Thorsby.

### DAIRY FACTORY INSPECTION AND INSTRUCTION

A new inspectorate was established this year at Vermilion with the instructor in dairying and poultry at Vermilion School of Agriculture acting as part time inspector. Thus, the present arrangement now shows dairy inspection districts as follows—Edmonton City, Edmonton West, Edmonton East, Vermilion, Camrose, Red Deer, Calgary City, Calgary rural and Lethbridge. Edmonton is also the headquarters of a cheese factory instructor.

Inspection reports for the year show 1,442 inspections at all types of dairy establishments including creameries, cheese factories, pasteurization plants, concentrated milk plants and combination plants. At cream purchasing establishments grades were checked on a total of 75,444 cans received. At whole milk plants where the raw product is accepted or rejected according to quality on arrival at the plant, the Methylene Blue, sediment and acidity tests are used regularly. Where possible, inspectors visit producers' farms where improvement in quality will assist the producer in his returns and the purchasing plant in its aim to distribute the highest quality finished product.

One of the main efforts especially planned to improve raw product quality, is extra emphasis on shipping can condition. Inspectors check regularly, both the state of repair of individual cans and efficiency of the cleaning and drying operation at the dairy plant. Shipping cans, in such worn or otherwise unsuitable condition are condemned, and indications that more care is needed at the plant to return empty cans to producers in best possible sanitary condition, are pointed out to plant personnel. That plants are anxious to arrange facilities so that this work may proceed along approved lines is evidenced by the improvement in up-to-date can washing and drying equipment now installed in many plants.

Inspectors submit samples to the Laboratory for analysis, essentially to indicate sources of contamination requiring immediate adjustment in plant procedures to overcome product defects. This includes samples listed under "Laboratory Services" as follows, mould and yeast, water, creamery surveys, butter samples for pH, milk plant control service and miscellaneous. The last named group includes special samples such as individual cream, milk or butter samples to be analyzed for chemical content or for possible adulteration.

Meetings and field days, usually organized with District Agriculturists, are attended by Dairy Branch personnel. Quality improvement in raw prod-

uce is the keynote. Arrangement of quality judging competitions by local inspectors, especially where fairs, field days, etc. are held at creamery centres have contributed to the general aim of acquainting producers with the objects of cream grading. Judging competitions for both raw and finished dairy products are also conducted by Dairy Branch personnel at Dairymen's Association Conventions.

### LABORATORY SERVICES

The demand for laboratory service continued to be heavy and the number of samples submitted during 1950 exceeded that of the previous year by 1,255.

The following table gives the distribution of these samples, and for comparison figures for 1949 have been included.

	1950	1949
Butter samples for moulds and yeasts .....	3,736	3,904
Water samples .....	64	33
Bacteriological creamery surveys .....	27	8
Butter samples for pH .....	1,461	764
Milk samples for mastitis control service .....	8,482	7,504
Milk plant control service .....	3,315	3,108
Milk samples for cow testing service .....	4,293	5,051
Egg products .....	193	201
Miscellaneous .....	313	64
	21,960	20,705

A close contact has been maintained between the laboratory and the creameries with the creamery inspector functioning as a liaison officer. The co-operation of the creamery personnel has been excellent with the result that creamery sanitation as judged by the mould and yeast count of the butter, has never been at a higher level than during 1950. This fact is emphasized in the following table:

#### CLASSIFICATION IN PERCENTAGE

Year	No. of Analyses	Excellent (0 to 10)	Good (11 to 50)	Fair (51 to 100)	Poor (over 100)
		3.6	12.7	12.1	71.6
1925 .....	686	3.6	12.7	12.1	71.6
1930 .....	2,799	35.7	20.3	19.3	33.7
1935 .....	2,177	55.4	17.9	7.7	19.0
1940 .....	3,013	64.6	16.0	7.2	12.2
1945 .....	4,050	68.2	14.9	5.7	11.2
1949 .....	3,904	69.1	17.1	5.1	8.7
1950 .....	3,736	79.0	18.0	2.9	5.1

Aside from sanitation, the laboratory has been assisting the creameries with other manufacturing problems and in particular, the control of the acidity of the butter as reported in terms of pH.

After several years where the tendency was towards a sweeter or low acid type of butter, this tendency has now leveled off and the readings for 1950 are practically the same as for 1949 as indicated in the following tabulation:

#### PERCENTAGE

Ph Range	1945	1946	1947	1948	1949	1950
Over 7.7 .....	6.6	1.6	3.5	3.4	5.0	5.9
7.3 to 7.7 .....	16.6	27.3	19.2	17.9	32.6	33.8
6.7 to 7.2 .....	46.3	54.8	64.5	67.6	55.7	55.4
6.2 to 6.6 .....	25.3	14.7	11.0	9.1	4.7	4.0
Below 6.2 .....	5.2	1.6	1.9	2.0	2.0	0.9

The noticeable increase in samples received under the mastitis control programme indicates that herd owners are becoming conscious of this real problem and are anxious to undertake a control program as a means of eliminating it. Since a healthy udder is of first importance in economical milk production, it is hoped that more and more herd owners will avail themselves of the service.

The increasing demand of the consumer for a safe milk supply has resulted in establishing a number of dairies, processing and distributing pasteurized milk. The laboratory has been called upon for assistance by many of them with some of the plants submitting samples for analysis at regular intervals throughout the year.

Many additional services have been performed by the laboratory such as, the testing for fat for herds under the Provincial Cow Testing Plans, propagating and distributing active cheese starter cultures to our cheese factories and providing solutions and indicators as needed in creameries, cheese factories, and dairies.

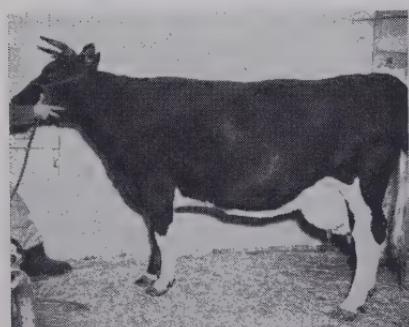
Some assistance was also given to the bee-keepers of the province in the control of bee diseases, to the egg processing plants in the control of their products, as well as to the Department of Animal Science, University of Alberta, in a study of prepartum milking.

### DAIRY CATTLE

The number of dairy cattle on Alberta farms, according to the June census, was 307,800. This is a decrease of 7,200 head or 2.3% below the census figure for the same date in 1949. Exceptionally high prices for beef were responsible for more drastic culling than normal.

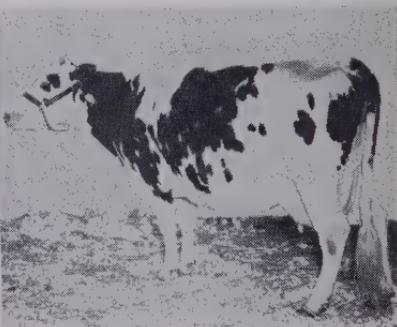
A number of well established dairy herds were dispersed by public auction during the year. On August 30th the purebred Holstein herd of P. Baker & Sons, Stony Plain, comprising 52 registered and 26 unregistered cows, was sold by auction for an average price of \$363.00. On October 25th one of the oldest established Jersey herds in the province was disbanded with the selling by auction of the 42 registered Jerseys owned by H. A. Calder of South Edmonton.

#### ALBERTA COWS ESTABLISH OUTSTANDING RECORDS DURING 1950



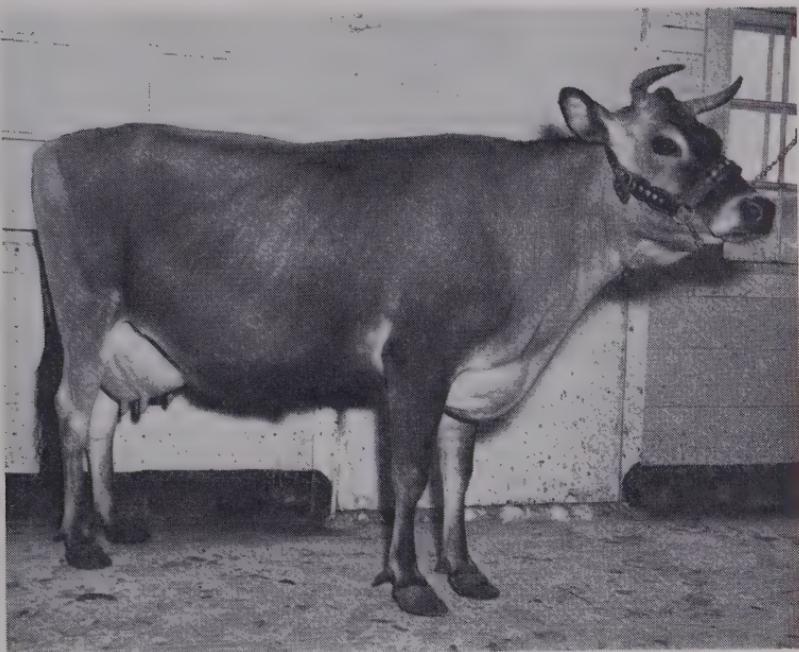
"Seymour Nora Ormsby"

A purebred Holstein cow owned by H. L. Ahrens, Red Deer, completed a record of 28,450 lbs. milk containing 894 lbs. fat. This is the largest yearly milk record ever reported in this class for Western Canada, and stands third for all time records from Canadian cows on twice-a-day milking.



"Altagrove Echo Korndyke B"

A purebred Holstein cow owned by G. M. Gibb, South Edmonton, completed the largest yearly butterfat record on twice-a-day milking ever made by a Holstein in the Prairie Provinces. Her record of 26,039 lbs. milk containing 1,016 lbs. fat, average test 3.9% butterfat, is also the seventh largest for butterfat ever completed in its class for all Canada.



"KENTUCKY GOLDEN BRENDA"

A purebred Jersey cow owned by Miss M. Barry, Fort Saskatchewan, completed a record of 10,807 lbs. of milk containing 575 lbs. fat, average test 5.32½ as a senior yearling. This is the largest yearly milk record ever reported in this class in Canada, on twice-a-day milking.

The following tabulation shows the average milk and butterfat production for all Alberta cows. It is based upon the total quantity of milk produced during the year and the number of cows kept for milk purposes as reported for June 1, 1950. An estimated test of 3.6% is used for butterfat calculations and for sake of comparison similar figures for previous years are included.

	1950	1949	1948	1940
Average Milk Production, lbs. ....	5,485	5,286	5,115	4,400
Average Butterfat Production, lbs. ....	197.5	190.3	184.1	158.4

While these figures depend to a large extent on estimates for dairy cattle numbers, and milk used on the farm, it is evident that the average production per cow has increased considerably in recent years. This trend is very significant as it indicates a better type of dairy cow together with improved feeding and management practices.

#### COW TESTING AND HERD IMPROVEMENT

Testing centres for determining the butterfat content of the milk samples were in operation at Edmonton, Camrose and Red Deer. The Red Deer testing centre was established early in 1950 to handle the herds in the central and southern part of the province which formerly were tested at the Olds School of Agriculture. Of the 117 herds under test, 46 were tested at Edmonton, while 40 and 31 herds respectively were tested at the Camrose and Red Deer centres.

## FIELD ACTIVITIES

During the year farm visits were made to a number of herds under test, at which time assistance in analyzing records was given. Feeding and management problems were discussed, scales examined and check tests made.

A considerable part of the supervisor's time was spent in assisting herd owners in locating and selecting female breeding stock and suitable herd sires. This service was not confined to those herd owners under test. The Supervisor co-operated with the Live Stock Branch in securing the dairy bulls placed under the Cattle Improvement Policy.

Extension work in dairy production was accomplished by means of dairy meetings, field days, radio talks, and Junior Dairy Calf Club activities.

The following tabulation sets forth the average production of the herds under the Provincial Cow Testing Service.

	1950		
	Plan I*	Plan II**	Total
No. herds under test .....	79	88	117
No. of cows under test .....	1,028	723	1,751
Average number of cows per herd .....	13.0	19.0	14.9
Herd average on basis of cow years (T)			
No. of cow years .....	653.56	457.75	1,111.31
Average production milk, lbs. ....	8,713	8,952	8,812
Average production butterfat lbs. ....	335.4	318.8	329.4
Average test .....			3.74

\* Plan I daily weights and monthly tests.

\*\* Plan II computed record from one day's weighing and monthly test.

(T) The total number of cows on test during the year is used in determining the herd average, except where new cows are placed on test, or a cow is sold or dies, in which case only that part of the year in which she produces is used.

There were sixteen more herds and 294 more cows under test during 1950 than in the previous year.

Plan II proved the more popular and accounted for most of the increase.

The average production of cows on test showed an increase of 211 lbs. of milk and 11.1 lbs. of butterfat, slightly more than the increase of all cows in Alberta.

Each herd owner received a report showing the average of his particular herd, and the average of all cows under test. To assist in the interpretation of this report a pictorial graph showing the production for each cow was supplied. This emphasized to the herd owner the fact that each cow is a separate production unit, and drew attention to the necessity for intelligent breeding and culling, together with improved feeding.

Graded Certificates of production were supplied for all cows attaining certain standards. There were 818 of these Certificates issued in 1950 as compared to 789 during the previous year.

The practise of listing those herds with an average butterfat production of over 300 lbs., as an "Honour Roll" has been continued, and it will be noted that 50 herds qualified during the past year as compared to 44 herds in 1949.

## HONOUR ROLL, 1950

Name	Address	No. of Cows	Ave. lbs. Butterfat
Alexander, W. W. ....	Picture Butte .....	12	80.6
Anderson, C. K. ....	Camrose .....	26	312.4
Anderson, J. W. ....	Bentley .....	14	364.8
Bacon, G. Ross ....	North Edmonton ....	21	311.4
Bailey, W. L. ....	Wetaskiwin .....	20	417.9
Black, Wm. ....	Camrose .....	5	443.4

Chartrand, M.	Therien	7	324.9
Choice Dairy	Medicine Hat	24	463.6
Christensen, J.	Ponoka	27	392.5
Diggle, J.	R.R. 1, Bentley	17	310.9
Erickson, J.	Bentley	14	385.8
Forbes, W. C.	Innisfail	9	341.8
Fulks, S. R.	Waskatenau	10	378.8
Gathercole, W.	Cochrane	32	323.4
Gertsch, J.	Bawlf	15	334.2
Gould, S. P.	Rosalind	9	374.4
Hoeve, J.	Lacombe	13	455.6
Hoyme, N. A.	Camrose	21	329.4
Hudd, C. J.	Lacombe	22	559.7
Kamps, A.	Lacombe	21	383.1
Koetke, O. H. F.	Holden	23	454.8
Meyers, G. P.	Millet	17	399.5
Miller, George	Vegreville	10	349.1
Nichols, R. A.	Rosalind	13	346.0
Olsen, O.	Sedgewick	11	345.6
Paxton, J.	Innisfail	6	429.7
Poffenroth, W. C. and A. F.	Dewinton	31	418.4
Pool, John	Rocky Mtn. House	9	327.7
Quantz, A. G.	Innisfail	6	366.6
Robertson, J. G.	Camrose	23	363.9
Rogers, J.	Bentley	30	407.5
Roth, C. C.	Rochfort Bridge	13	369.5
Schubert, H.	Hay Lakes	12	125.0
Shepherd, R. M.	Erskine	15	321.5
Sisters of Charity	St. Albert	34	374.8
Stannard Bros.	R.R. 2, Edmonton	42	432.1
Stauffer, H. E.	Tofield	8	302.9
Stefox, A. E.	Daysland	6	364.6
Sterling, L.	Westlock	36	305.7
Stevenson, Mrs. V.	Rimbe	10	305.0
Stollery, A.	Armema	6	347.7
Stolte, G.	Blackfalds	24	345.3
Terhorst, H.	Jarvie	11	362.1
Thesberg, Niels	R.R. 1, Innisfail	13	333.3
School of Agriculture	Vermilion	21	341.4
Wilkinson, C. H.	Clover Bar	22	372.0
Winsness, Wm.	Ryley	22	355.2
Yoder, E. E.	Tofield	9	351.8
Zielie, W. E.	R.R. 3, Lacombe	12	361.9
Zwaneveld, P.	Blackfalds	10	320.2

### DAIRY COST AND FARM MANAGEMENT SERVICE

For the year 1950, studies were continued in each of the milk control areas of Edmonton, Ponoka, Camrose, Red Deer, Calgary, Lethbridge, and Medicine Hat. Preliminary analysis for cost of producing milk for the milk sheds of Edmonton, Calgary, and Lethbridge, have already been made available to the Milk Control Board and the Milk Producers' Associations. These results were compiled during the fall for the farm cost accounts closed during the summer. In addition the same farms were revisited during the fall to record the crop and feed conditions of the past summer. This information will bring the cost data as up to date as possible and hence be available for appraising the trend in cost of production, especially, as affected by a second dry and irregular type of crop year.

A total of 110 supervised farm accounts were recorded in farm cost account books after making two visits to the farm and were brought into the Cost Study office at the University for analysis. The previous year's account books were returned to these same farms along with cost and farm management analysis of each man's business compared to the group average result for each area. The following table shows the number of accounts which were opened and completed for each area under study.

Area	Accounts Opened		Accounts Closed		Accounts Re-opened	New Study of Mixed Farms for 1951
	1949	Drop-outs	1950			
Edmonton	43	2	41		41	
Calgary	40	4	36		42	
Lethbridge	13	1	12		14	
Medicine Hat	13	3	10		12	
Red Deer	10	6	4		4	
Ponoka	4	1	3		3	
Camrose	5	1	4		4	
Leduc and Wetaskiwin					60	
Totals	128	18	110	120	60	

It is planned to carry 120 fluid milk accounts and add 60 new accounts of a mixed farm study for the year 1951. The work is being carried on by a supervising economist and an assistant both sharing office and field work along with one full time office clerical worker. Some assistance is obtained from the Milk Control Board's representative in Lethbridge in field work on the accounts and in Calgary from office files on milk statements and other required data.

In addition to the regular duties the supervisor and assistant engaged in considerable extension work through radio talks, meetings, interviews and correspondence.

The supervisor attended the third annual conference of economists on similar studies in Saskatchewan, Manitoba and Ontario. The meeting was held at Saskatoon for the purpose of working out uniform techniques of procedure in analyzing and reporting the cost of production and farm management studies. A new Dairy Farm Cost Account Book was also planned along with new office schedules for analysis. These were then ordered jointly to minimize expenditure.

Preliminary reports are made available to the Milk Control Board as soon as new data can be compiled. This assists in posting an up to date trend in milk production costs and conditions. Special reports on crop conditions and certain additional and more detailed cost of production information was provided to the Board of Public Utility Commissioners, and the Milk Producers Association. A Summary of average results of cost of production and farm earnings was also made available to the District Agriculturists for the areas concerned.

In 1951 the studies will be extended to include a group of mixed farms. Here the emphasis will be for extension work in better farm book-keeping and interpretation of farm management problems rather than a detailed study on cost of production as required when setting the price for fluid milk. The area chosen for this additional project is that from Leduc to Wetaskiwin and will commence with sixty farms representing the main systems of farming in that area. Some assistance is being given through the District Agriculturists and Municipal Agricultural Supervisors in the research stage of the study, and will increase as the data is made available for extension work. The plan provides for shifting the work to a new area every two or three years so that over a period of years all important farming-type areas of the Province will have been included. The detailed records from the farm accounting investigation will make possible not only an analysis of the farm business as a whole, but also a distribution of the factors of production to the various enterprises.

With the main systems of farming represented by several farms with similar operations it will be possible to compare the relative efficiencies of producing the various agricultural products. Computing levels of labour income from each type of farm setup should also prove very useful to extension workers.

The interest in bookkeeping, by the farmers visited, is surprising. Account books or files of some type have been left with the majority of farmers signifying their willingness to co-operate. The complexity of the accounting system adopted will depend on the tastes and aptitudes of the farmer, as well as the type of farm setup.

The accounting year for this new group of mixed farms is to be the calendar year. This is a departure from that used in the Fluid Milk Studies, conducted over the past ten years, where the crop year from May to May

was adopted. Two factors are responsible for this change; first, to obtain fullest co-operation from the farmer the period must coincide with the income tax year, and secondly, because of limited staff on the survey a calendar year will assist in giving better distribution of field and office work. The emphasis on this group would not be so much on precision in cost of producing milk as in extension work in keeping farm accounts, so that the analysis of these and the subsequent reports and interpretation could be made towards applying better farm management practices.

### FROZEN FOOD LOCKER PLANTS

While the number of new Frozen Food Locker Plants established during 1950 was fewer than in recent years, there were ten new plants constructed and eight of these put into operation by the end of the year. These plants are modern in design and equipment and should add a very worthwhile service to the districts in which they are located.

The plants at Grimshaw and Lamont were completely destroyed by fire during the year but are now being rebuilt and will re-open early in 1951.

At the close of the year there were 141 plants in operation with a total of 48,647 lockers installed. This represents an increase of 4,627 lockers or 10.5% over the previous year.

Four Animal Food Cold Storage Plants located in the northern section of the province operated during the year.

There were 726 inspections made by officers of the Dairy Branch which represents an increase of 61 inspections over the previous year.

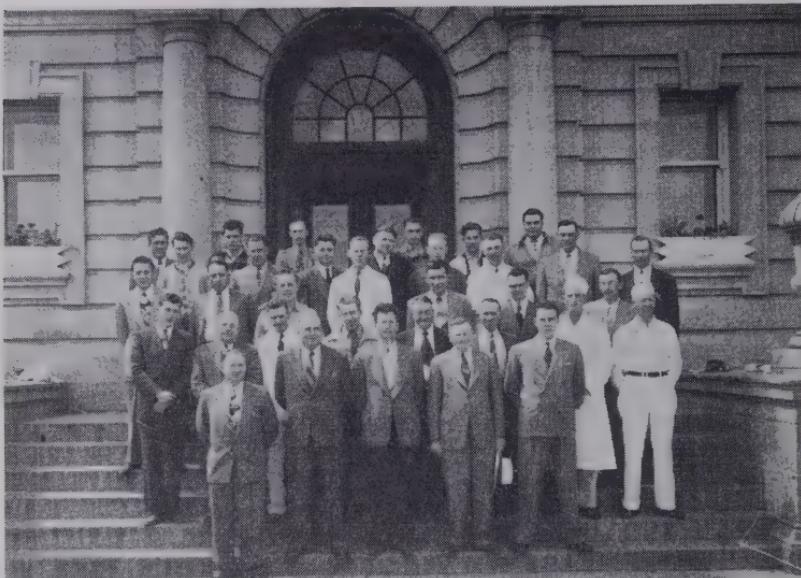
The standard of service and operation has improved in the majority of plants. This improvement can be attributed to the new Regulations pertaining to sanitation and temperatures and also closer supervision on the part of the inspectors.

Approximately 400 attended the Sixth Annual Convention of the Alberta Quick-Freeze Locker Association in the Palliser Hotel, Calgary, March 12th, 13th, and 14th. The programme consisted of practical demonstrations and addresses. Discussion clinics were introduced into the programme with considerable success. The Bruce Robinson Electric Merit Award Shield, for the most ideal plant was won by the Canadian Quick-Freeze Limited, Calgary, C. Ursenbach, Prop.; The Frozen Food Locker Co., Edmonton, J. Wolch, Manager, and The Grande Prairie Meats and Locker Plant, Grande Prairie, Geo. Vagt, Prop., placed 2nd and 3rd respectively. Officials of the Dairy Branch were responsible for selecting the winners. Detailed scores of each plant along with the score on the top plant were forwarded to each operator. This information should prove helpful to operators interested in raising the standard of their plant and service.

Other features of the Convention were competitions for cured meats. Wallace's Limited, Coronation, won first place in the Bacon Section; Canadian Quick-Freeze Limited, Calgary, was first in the Tenderized Ham Section and the High River Lockers Ltd. was first for a Standard Ham.

During the year eight public meetings consisting of addresses and motion pictures were held for the official opening of new plants. The attendance was exceptionally good, being over 250 per meeting on the average. These meetings were sponsored by the operators and were addressed by the Supervisor of Frozen Locker Plants and the local District Home Economist.

The first Frozen Food Locker Short Course to be held in Canada took place at the University of Alberta, Edmonton, during the period June 12th to June 24th, 1950. The Faculty of Agriculture of the University of Alberta, and the Provincial Department of Agriculture, Edmonton, co-operated in conducting this course. Thirty students enrolled; of these 26 were in regular attendance and qualified for the University's Certificate of Attendance. Laboratory periods on slaughtering, cutting, packaging, curing and freezing meats; killing, plucking, eviscerating, cutting, wrapping and freezing of poultry; veterinary inspection of meats; the preparation and packaging of fruits and vegetables for freezing, refrigeration and sanitation.



Frozen Food Locker Plant Short Course held at University of Alberta—June 12-24, 1950.

Front Row: L. H. Arnold, D. H. McCallum, D. R. Clandinin, F. W. Wood, L. M. Smith.  
Second Row: D. R. Meek, H. R. Thornton, R. Warren, R. A. Carl, E. R. Jacks, J. Stakich,  
W. F. Martin, J. G. Baker.

Third Row: R. O. Dixon, B. L. Medve, D. Hanna, J. Bieber, I. Fano, J. C. Alexander,  
S. Paulsen.

Fourth Row: L. Ferguson, G. O. Fry, P. Filewych, C. R. Stevenson, H. Christensen,  
H. J. Weitzell, C. V. Cranston, V. W. Slavick.

Fifth Row: A. A. Bollinger, A. H. Wallace, P. H. Byam, W. Coutts, J. N. Rowat,  
D. S. Poxon.

Lectures included refrigeration problems, sanitation, microbiology of meats, legal and economic aspects of the locker industry, ice formation, detergency, and the metals suitable for contact with food.

An afternoon was spent in a local packing plant where the various stages of processing meats were clearly demonstrated, the inspection and grading of meats was explained in detail.

The Ham and Bacon curing classes were conducted in a local locker plant. Evening panel discussions on plant records, plant management, public relations and advertising were held with members of the Alberta Quick-Freeze Locker Association in attendance.

Twenty-six students were successful in passing the examinations and received Certificates of Merit from the Alberta Quick-Freeze Locker Association. Mr. Robert Warren of Vegreville won the Gold Medal also, donated by the Association to the student receiving the highest standing.

Following is a list of Frozen Food Locker Plants which commenced operation during 1950:

Ashton Lockers .....	Burdett
Carseland Lockers .....	Carseland
Chauvin Frozen Food Lockers .....	Chauvin
Ideal Locker Plant .....	Falher
Lefty's Meat Market & Locker Plant .....	Hardisty
Borden's Locker Plant .....	Hythe
Onoway Meat Market & Locker Plant .....	Onoway
Peace River Meat Co. ....	Peace River
Smoky Lake Lockers .....	Smoky Lake
St. Paul Co-Op. Association Ltd. ....	St. Paul

The following statistics are tabulated from information received on monthly reports and covers the 12 month period December 1st, 1949, to November 30th, 1950. Similar statistics for the same period during the previous year have been included for comparison.

	1949		1950	
	Pounds	Percent	Pounds	Percent
Fresh Meats .....	9,451,764	75.9	9,713,597	75.3
Fish .....	150,478	1.2	122,192	.9
Poultry .....	742,388	6.0	814,869	6.3
Game Birds .....	80,626	.6	75,465	.6
Big Game .....	226,026	1.8	110,496	.9
Cured Meats .....	1,259,717	10.1	1,419,175	11.0
Lard Rendered .....	132,600	1.1	155,569	1.2
Fruits .....	163,527	1.3	189,595	1.5
Vegetables .....	148,587	1.2	195,399	1.5
Miscellaneous .....	103,550	.8	99,006	.8
Total .....	12,460,243	100.0	12,895,363	100.0
Number of plants reporting .....			134	141
Number of lockers installed .....			44,021	48,647
Average number of lockers installed .....			329	345
Number of lockers rented, December 1st .....			40,871	43,802
Percentage of lockers rented, December 1st .....			92.8	90.0
Average pounds food stored per locker, with complete service .....			320.7	307.1
Average pounds food stored per locker, without complete service .....			179.4	176.4
Average poundage per locker, all plants .....			304.9	294.4
Average pounds per locker on the basis of lockers rented for 12 months .....			328.3	305.2
Inspections during the year .....			665	726

## STAFF CHANGES

A larger number of staff changes took place than has been the case in recent years. R. Buckingham, Creamery Inspector for the Camrose district, retired at the end of November after 28 years of service. He will be replaced at the beginning of 1951 by L. Montgomery who for several years has been manager of the Creamery at Bluffton.

D. Clayton resigned early in the year as assistant economist for the Dairy Cost Study. He was replaced by T. A. Peterson as at May 1st.

A. D. Bassett resigned from the Creamery Inspection staff on May 31st. S. S. Paulsen, Laboratory Technician, was appointed Creamery Inspector to replace Mr. Bassett.

E. V. Hamula, Dairying and Poultry Instructor, at the Vermilion School of Agriculture, was appointed part time Inspector for the newly established district with headquarters at Vermilion.

Several changes in the personnel performing laboratory and clerical duties occurred during the year.

## DEPARTMENT OF AGRICULTURE

## ALBERTA DAIRY STATISTICS

## Supplement to Annual Report

## MILK PRODUCTION AND UTILIZATION

Percentage of Milk Used

Year	Total Milk Production in Million lbs.	Creamery Butter	Dairy Butter	Factory and Home Made Cheese	Miscellaneous Factory Products	Milk and Cream Consumed	Fed Farm Animal
1920	784	35.9	27.8	.6	.9	34.8*	
1925	923	50.6	24.5	1.7	.5	22.7*	
1930	1,077	38.5	25.8	1.2	.9	25.1	
1935	1,384	39.1	22.0	1.3	.4	25.6	11.6
1940	1,671	41.8	21.0	2.0	1.5	24.9	8.8
1945	1,731	46.9	12.1	2.7	2.8	26.7	8.8
1946	1,658	43.5	13.0	2.3	2.6	29.3	9.3
1947	1,700	44.2	13.1	2.2	3.2	28.3	9.0
1948	1,673	45.4	13.8	1.8	3.5	26.8	8.7
1949	1,665	45.0	12.2	1.9	4.1	27.5	9.3
1950 Prelim.	1,688	43.4	9.6	1.9	3.7	28.6	12.8

\* Includes Milk otherwise used.

## FARM INCOME FROM SALE OF DAIRY PRODUCTS (Estimated)

1926	\$6,309,000
1930	6,763,000
1935	6,777,000
1940	7,993,000
1945	20,037,000
1946	20,855,000
1947	24,513,000
1948	30,516,000
1949	28,094,000
1950 Prelim.	27,079,000

## TOTAL VALUE OF DAIRY PRODUCTS

Year	Year		
1900	\$546,476	1930	
1906	2,000,000	1935	\$18,675,500
1910	7,855,761	1940	14,252,500
1915	15,896,586	1945	19,582,344
1920	34,000,000	1949	34,588,105
1925	23,002,000	1950 Prelim.	52,350,000
			51,360,000

## CREAMERY BUTTER PRODUCTION

Year	Pounds	Av. Output Per Creamery	Selling Value Total Cents Per Lb.
1906	42	1,960,356	\$415,800 (21.21)
1910	60	2,238,078	575,000 (25.69)
1915	57	7,544,148	2,021,443 (26.79)
1920	53	11,821,291	6,555,509 (55.45)
1925	99	19,630,101	198,284 (35.45)
1930	92	17,716,744	192,573 (28.04)
1935	97	23,094,707	238,090 (19.90)
1940	95	29,796,520	313,647 (22.31)
1945	91	34,692,917	381,241 (32.83)
1946	92	30,744,000	334,174 (37.21)
1947	91	32,052,000	352,222 (51.19)
1948	91	32,421,000	356,275 (65.53)
1949	93	31,996,000	344,046 (58.07)
1950 Prelim.	92	31,248,000	339,653 (53.00)

## CREAMERY BUTTER PRODUCTION

	1949 Pounds	1950 Pounds	% Increase - Decrease
January	1,390,228	1,469,610	x 5.7
February	1,333,667	1,455,676	x 9.1
March	1,688,983	1,893,726	x 12.1
April	2,049,236	2,288,469	x 11.7
May	3,258,252	3,170,953	- 2.7
June	4,382,807	4,444,815	x 1.4
July	4,424,060	4,469,248	x 1.0
August	4,361,125	4,132,844	- 5.2
September	3,802,554	3,018,967	- 8.6
October	2,478,862	2,219,224	- 10.5
November	1,841,387	1,456,129	- 20.9
December	1,484,980	1,228,587	- 17.3
	31,996,243	31,248,198	- 2.3

**CREAMERY BUTTER PRODUCTION**  
 (By Regional Divisions)

	1949	1950	
Northern, Twp. North of 47 .....	15,864,259	15,362,994	- 3.2
Central, Twp. 34 to 47 .....	11,125,703	11,156,248	x .3
Southern, Twp. 1 to 33 .....	5,006,281	4,728,956	- 5.6
	31,996,248	31,248,198	- 2.3

**GRADES OF CREAMERY BUTTER**

Since May 1st, 1927, the grading of Creamery Butter has been a function of the Federal Department of Agriculture

Year	Total Lbs.	Percentage In Each Grade			B.T.G.	% 93 Score & Over
		Graded	First	Second		
1927	3,278,327	68.8	24.0	7.2	...	...
1930	5,679,520	68.7	20.0	11.3	...	...
1935	19,081,270	83.0	10.5	6.0	.5	...
1940	27,243,216	88.1	7.1	4.4	.4	(55.5)
1945	31,771,600	88.6	5.7	5.4	.3	(45.1)
1946	27,842,304	88.4	5.5	5.7	.4	(35.4)
1947	29,066,632	90.3	4.3	4.9	.5	(36.4)
1948	30,214,408	90.5	4.8	4.3	.4	(36.2)
1949	30,013,083	92.6	5.5	1.7	.2	(36.8)
1950	30,561,496	93.3	5.3	1.0	.4	(41.0)

**CHEESE PRODUCTION**

Factories	Pounds Cheese	Av. Output Per Factory	Selling Value	
			Total	Cents Per Lb.
1906	7	97,739	13,963	\$13,000 (13.30)
1910	11	220,000	20,000	27,500 (12.50)
1915	13	381,832	29,372	68,441 (17.93)
1920	7	398,750	56,964	110,355 (27.70)
1925	14	1,472,835	105,274	306,604 (20.80)
1930	8	1,035,352	129,419	175,392 (16.94)
1935	11	1,364,526	124,048	168,280 (12.33)
1940	18	2,705,853	150,325	385,584 (14.25)
1945	18	3,985,160	221,398	903,309 (22.67)
1946	18	3,231,000	179,500	746,000 (23.09)
1947	17	3,078,000	181,053	901,000 (29.28)
1948	18	2,536,000	142,556	894,000 (34.85)
1949	14	2,781,000	198,635	925,000 (33.27)
1950 Prelim.	14	2,940,000	209,975	1,029,000 (\$5.00)

**CHEESE PRODUCTION**

	1949 Pounds	1950 Pounds	% Increase x Increase - Decrease	
			x Increase	- Decrease
January	122,149	177,950	x 45.7	
February	111,226	174,451	x 56.8	
March	147,965	235,522	x 59.2	
April	206,076	225,755	x 9.5	
May	301,122	347,404	x 15.4	
June	377,768	438,794	x 14.8	
July	345,829	440,688	x 27.4	
August	334,479	375,801	x 12.4	
September	286,658	220,139	- 23.2	
October	223,855	145,825	- 34.9	
November	159,644	81,763	- 48.8	
December	164,112	80,559	- 50.9	
	2,780,883	2,939,651	x 5.7	

**GRADES OF CHEDDAR CHEESE**

Year	Total Lbs.	Percentage-In Each Grade			B.T.G.	% 93 Score & Over
		Graded	First	Second		
1938	1,531,530	57.8	41.3	.7	.2	(18.7)
1940	1,935,750	70.6	28.4	.9	.1	(23.0)
1945	3,869,315	82.0	17.6	.3	.1	(33.3)
1946	3,100,332	79.6	19.8	.4	.2	(26.9)
1947	2,928,768	83.9	15.6	.5	.0	(29.7)
1948	2,531,178	88.5	11.0	.5	.0	(34.8)
1949	2,650,107	89.7	9.7	.4	.2	(35.9)
1950	3,118,080	84.9	13.6	1.3	.2	(30.3)

## ICE CREAM PRODUCTION AND VALUE

Year	Quantity in Gallons	Price Per Gallon	Value
1928	652,345	\$1.20	\$782,814
1930	637,196	1.21	768,225
1940	664,703	1.08	720,000
1945	1,072,000	1.20	1,284,000
1946	1,036,000	1.21	1,254,000
1947	1,717,000	1.30	2,232,000
1948	1,840,000	1.36	2,502,000
1949	1,978,000	1.40	2,769,000
1950 Prelim.	1,923,000	1.45	2,788,000

## GRADES OF CREAM IN PERCENTAGE RECEIVED AT CREAMERIES

Year	Table Grade	Special Grade	First Grade	Second Grade	Off Grade	Total Lbs. Butterfat
1922	2.3	32.4	37.3	27.2	.8	10,185,277*
1925	1.7	39.0	47.1	12.0	.2	14,019,009*
1930	3.2	43.9	45.9	6.6	.4	15,187,266
1935	2.9	61.3	31.3	4.3	.2	19,561,318
1940	3.0	66.4	28.0	2.4	.2	25,347,571
1945	1.0	54.2	39.9	4.7	.2	29,286,577
1946	.7	52.5	41.2	5.2	.4	26,121,338
1947	.8	52.4	41.5	4.8	.5	27,617,527
1948	.7	51.4	43.2	4.4	.3	28,173,770
1949	.9	53.5	42.1	2.2	.2	27,863,392
1950	1.1	56.3	39.4	2.9	.3	27,119,080

\* Quantity graded by Provincial Cream graders only, service commenced May 8, 1922.

SPECIAL GRADE BUTTERFAT PRICES  
(F.O.B. Shipping Point)

	1950		1949		1948		1947	
	Cents	%	Cents	%	Cents	%	Cents	%
January	61.7	( 4.9)	70.2	( 4.6)	69.9	( 4.6)	38.5	( 4.0)
February	61.7	( 5.3)	70.2	( 4.6)	69.9	( 4.6)	38.5	( 4.8)
March	60.1	( 5.7)	63.9	( 5.3)	69.9	( 5.6)	38.5	( 5.3)
April	57.4	( 7.2)	59.45	( 6.6)	69.9	( 6.7)	38.5	( 6.5)
May	53.7	( 9.7)	59.2	(10.0)	69.9	( 9.3)	50.0	(10.2)
June	52.7	(13.8)	59.2	(13.4)	69.2	(14.4)	50.6	(14.6)
July	53.7	(14.6)	59.2	(13.8)	69.9	(14.5)	52.9	(14.6)
August	53.7	(12.7)	59.2	(12.9)	69.9	(12.3)	56.9	(12.7)
September	54.3	( 9.5)	60.2	(10.4)	69.9	( 9.9)	62.4	(10.3)
October	56.9	( 7.4)	60.2	( 7.7)	69.9	( 7.3)	61.65	( 7.4)
November	56.9	( 5.0)	61.2	( 6.0)	69.9	( 5.4)	62.25	( 5.3)
December	57.7	( 4.2)	61.2	( 4.7)	69.9	( 4.4)	68.25	( 4.3)
The Year	55.9	(100.0)	61.24	(100.0)	69.79	(100.0)	51.53	(100.0)

The average prices paid for Special Grade butterfat do not include the Dominion Government Subsidy of 10¢ per pound for January to April inclusive 1947.

NOTE: The figures enclosed in brackets represent the monthly percentages of the cream receipts for the year.

## MILK COW NUMBERS AND AVERAGE PRODUCTION

Year	No. Cows June 1st	Average Milk Pounds	Production Butterfat Pounds
1920	285,900	2,744	98.7
1925	391,100	2,957	106.5
1930	351,600	3,118	112.2
1935	453,800	3,125	112.5
1940	370,600	4,400	158.4
1945	376,400	4,596	165.5
1946	326,200	5,079	182.8
1947	315,900	5,381	193.7
1948	327,000	5,115	184.1
1949	315,000	5,286	190.3
1950	307,800	5,485	197.5

An average test of 3.6% is used to calculate the average butterfat.

# STATISTICAL DATA RELATING TO MILK CONTROL

Submitted by the

## BOARD OF PUBLIC UTILITY COMMISSIONERS [A. T. Neale, Administrator of Milk Control]

The tables which follow relate to milk and cream supplied and sold for fluid consumption in the areas of the Province controlled by the Board of Public Utility Commissioners during the year 1950.

TABLE 1  
PER CAPITA CONSUMPTION OF FLUID MILK, IN PINTS, MONTHLY FOR 1950  
(To Include Cream Consumption Converted to Milk Equivalent)  
PILOTS (PER DIEM)

Area	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary .....	.932	.993	1.01	.996	1.014	1.029	.979	.961	1.019	1.029	1.044	1.027
Camrose .....	.924	.982	1.01	.965	.854	.907	.841	.825	.888	.872	.908	.907
Crow's Nest Pass ...	.437	.489	.493	.498	.522	.632	.621	.58	.59	.584	.59	.58
Edmonton ....	.963	1.026	1.044	1.03	1.03	1.02	.973	.965	1.032	1.009	1.057	1.03
Lethbridge .....	.853	.937	1.01	.924	.955	.959	.894	.904	.95	.937	.949	.96
Medicine Hat .....	.758	.804	.81	.779	.77	.746	.753	.724	.75	.764	.77	.79
Ponoka .....	.967	.777	1.166	1.122	1.146	1.154	.997	1.071	1.068	1.14	1.19	1.20
Red Deer .....	1.03	1.07	1.107	1.116	1.104	1.146	1.23	1.134	1.171	1.153	1.168	1.186

TABLE 2  
CONSUMPTION OF FLUID MILK MONTHLY, 1950—IN QUARTS

Area	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary .....	1,218,206	1,168,943	1,316,049	1,248,588	1,315,816	1,303,476	1,257,747	1,252,451	1,305,564	1,338,856	1,315,053	1,336,970
Camrose .....	48,459	46,773	52,936	48,636	48,215	46,226	44,059	45,796	45,637	44,98	46,089	47,625
Crow's Nest Pass .....	56,895	55,860	60,880	61,042	63,814	73,647	71,818	73,804	74,338	74,276	73,032	74,256
Edmonton ....	1,581,132	1,524,776	1,719,503	1,631,958	1,700,579	1,639,874	1,581,140	1,561,426	1,652,661	1,650,055	1,672,338	1,675,104
Lethbridge .....	200,092	197,047	220,328	206,096	221,409	217,149	213,502	211,334	217,031	218,152	212,273	220,612
Medicine Hat .....	128,621	122,897	136,965	128,562	132,621	130,762	130,212	125,448	125,609	130,926	127,663	130,520
Ponoka .....	20,482	19,794	23,068	21,909	24,324	24,077	21,624	21,412	23,014	22,635	23,441	23,441
Red Deer .....	65,922	61,053	69,174	67,649	70,382	71,121	76,398	70,066	71,588	71,841	70,921	73,251

## DEPARTMENT OF AGRICULTURE

TABLE 3  
CONSUMPTION OF FLUID MONTHLY, 1950—IN QUARTS

Area	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary .....	116,296	111,499	123,743	117,690	122,766	117,372	120,960	116,054	113,755	124,569	122,876	124,780
Camrose .....	1,808	1,692	1,976	1,873	1,121	1,708	1,671	1,731	1,604	1,856	1,706	1,763
Crow's Nest .....												
Pass .....	135	236	410	506	497	690	1,002	324	231	214	214	212
Edmonton .....	139,314	131,180	147,220	140,291	144,461	130,525	138,633	141,865	138,256	145,140	148,262	151,577
Lethbridge .....	17,654	17,608	20,143	19,003	19,438	18,646	18,801	18,631	18,767	19,609	19,996	20,010
Medicine Hat .....	8,058	7,604	8,340	7,636	7,589	6,954	7,071	6,942	7,263	7,787	7,680	7,760
Ponoka .....	1,094	1,187	1,246	1,308	1,247	1,173	1,124	1,289	1,182	1,446	1,495	1,495
Red Deer .....	2,320	2,282	2,611	2,537	2,451	2,417	2,958	2,766	2,588	2,749	2,637	2,892

TABLE 4  
CONSUMPTION OF CHOCOLATE DAIRY DRINK MONTHLY, 1950—IN QUARTS

Area	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary .....	18,070	21,083	23,833	24,471	30,165	5,514	41,551	40,102	36,847	33,659	29,574	30,433
Camrose .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crow's Nest .....												
Pass .....	36,645	45,560	43,736	55,091	2,992	1,737	13,293	1,428	558	299	299	299
Edmonton .....	32,163	36,293	41,396	50,808	67,487	73,076	63,259	63,250	64,142	68,394	65,013	65,013
Lethbridge .....	3,081	3,789	4,628	4,413	8,481	7,314	8,974	7,531	6,818	4,724	4,610	4,610
Medicine Hat .....	3,333	3,790	.....	.....	5,237	4,813	6,498	6,682	5,805	5,563	5,045	5,326
Ponoka .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Red Deer .....	183	263	270	626	769	1,359	1,142	1,142	1,131	1,023	1,053	1,075

TABLE 5  
CONSUMPTION OF BUTTERMILK MONTHLY—1950—IN QUARTS

Area	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary .....	11,295	12,764	14,858	16,568	17,162	20,596	21,510	18,974	16,008	13,776	12,645	13,146
Camrose .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crow's Nest .....												
Pass .....	13,771	16,928	21,061	21,481	26	2,835	81	144	126	72	17,437	16,922
Edmonton .....	1,093	1,509	1,818	1,793	2,495	36,801	36,871	25,527	22,810	17,422	17,033	17,033
Lethbridge .....	405	637	823	803	900	1,039	3,937	3,363	2,300	1,523	1,429	1,326
Medicine Hat .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ponoka .....	35	436	557	700	792	905	1,021	656	640	474	433	448

TABLE 6  
FLUID MILK CONSUMPTION, 1946-1950—IN QUARTS

Area	1946	1947	1948	1949	1950
Calgary .....	15,138,343	14,437,081	13,910,727	14,602,149	15,372,709
Camrose .....	NO RECORD		498,817	547,698	565,449
Crow's Nest Pass ....	NO RECORD		741,929	729,359	813,662
Edmonton .....	18,515,522	17,575,803	17,287,723	18,740,153	19,589,606
Lethbridge .....	2,806,947	2,422,713	2,357,966	2,444,563	2,555,025
Medicine Hat .....	NO RECORD	1,776,904	1,771,824	1,568,148	1,550,809
Ponoka .....	NO RECORD		248,739	257,290	266,587
Red Deer .....	755,730	761,967	772,833	820,462	839,386
Totals .....	37,216,542	36,974,468	37,590,558	39,709,822	41,553,183

TABLE 7  
FLUID CREAM CONSUMPTION, 1946-1950—IN QUARTS

Area	1946	1947	1948	1949	1950
Calgary .....	1,519,581	1,600,813	1,417,539	1,380,214	1,432,364
Camrose .....	NO RECORD		20,433	22,929	20,509
Crow's Nest Pass ....	NO RECORD		1,573	2,616	4,529
Edmonton .....	1,632,854	1,710,999	1,537,893	1,640,743	1,696,727
Lethbridge .....	184,753	208,730	191,806	207,576	228,306
Medicine Hat .....	NO RECORD	96,473	95,788	92,358	90,634
Ponoka .....	NO RECORD		13,555	15,214	15,161
Red Deer .....	NO RECORD		37,719	30,866	31,208
Totals in Qts. .....	3,337,188	3,617,015	3,316,306	3,392,516	3,519,438
Totals in B.F. Equivalent lbs. ..	837,013	1,401,535	995,161	1,028,445	1,077,533

TABLE 8

FLUID MILK PURCHASES BY DISTRIBUTING PLANTS, 1946-1950—IN POUNDS

Area	1946	1947	1948	1949	1950
Calgary .....	48,220,977	47,942,162	44,746,741	48,277,972	50,296,562
Camrose .....	NO RECORD		1,326,321	1,555,293	1,742,920
Crow's Nest Pass ....	NO RECORD		1,393,870	1,166,023	1,386,516
Edmonton .....	51,149,051	51,191,446	52,369,056	54,684,765	58,260,599
Lethbridge .....	6,724,565	7,016,653	6,624,628	6,730,570	7,077,846
Medicine Hat .....	NO RECORD	4,626,413	4,593,004	4,760,167	4,674,066
Ponoka .....	NO RECORD		699,388	790,910	870,160
Red Deer .....	4,319,322	4,061,350	3,195,454	3,333,969	3,373,296
Totals (lbs.) .....	110,413,915	114,839,024	114,948,462	121,299,669	127,681,965

TABLE 9

SUMMARY OF MILK AND CREAM PRODUCERS AND DISTRIBUTORS OPERATING ON DECEMBER 31, 1950, UNDER BOARD OF PUBLIC UTILITY COMMISSIONERS LICENSE

Area	Milk		Cream		Total	
	Produc- ers	Distrib- utors	Produc- ers	Distrib- utors	Produc- ers	Distrib- utors
Bowden .....	1	1	...	...	1	1
Calgary .....	252	5	35	1	287	6
Camrose .....	8	2	...	...	8	2
Crow's Nest Pass ....	13	1	...	...	13	1
Edmonton .....	356	5	31	...	387	5
Lethbridge .....	29	2	...	...	29	2
Medicine Hat ....	40	5	...	...	40	5
Ponoka .....	4	1	1	...	5	1
Red Deer .....	16	2	9	...	25	2
Totals .....	719	24	76	1	795	25

## DEPARTMENT OF AGRICULTURE

TABLE 10

MILK AND CREAM PRICES AS EFFECTIVE DECEMBER 31st, 1950

Area	MILK			CREAM			MILK PRODUCTS		
	To Pro-	10% Sub-		18%	32-34%	Chocolate			
	ducers	Per 100	3.5% B.F.	Per Pint	Table Per Pint	Whipping Pt. 1/2 Pt.	Milk Per Qt.	Buttermilk Per Qt.	
	\$	c		c		c	c	c	c
Bowden .....	4.08	17		...		25	...	...	...
Calgary .....	4.59	19		22	38	29	20	18	18
Camrose .....	3.91	16		20	35	27	18	15	15
Crow's Nest Pass	4.87	21		...	...	30	21	21	
Edmonton .....	4.59	18		22	38	29	19	17	17
Lethbridge .....	4.25	18		22	38	29	19	17	17
Medicine Hat .....	4.59	19		22	38	29	20	18	18
Ponoka .....	3.91	16		20	35	27	18	15	15
Red Deer .....	4.56	18		22	38	29	20	18	18

TABLE 11  
COMPARISON OF PURCHASE AND RE-SALE PRICES OF MILK AND MILK PRODUCTS  
AS EFFECTIVE DECEMBER 31st, 1950

Province	City	PURCHASE PRICE			RETAIL SALE PRICE		
		Per 100 lbs. Basis	Milk per Qt.	Cream Sub-standard Per Pt.	Whipping 32-34% per Half Pt.	Buttermilk Per Qt.	Chocolate Dairy Drink Per Qt.
		3.5% B.F.	c	c	c	c	c
British Columbia	Vancouver	4.13	19	23	33	17	20
Alberta	Edmonton	4.59	18	22	29	17	19
Saskatchewan	Regina	4.55	18	20	28	17	19
Manitoba	Winnipeg	4.00	18	20	27	14	19

## REPORT OF THE POULTRY BRANCH

(F. J. Higginson, Acting Poultry Commissioner)

Inspectors:	E. R. Nicholls	Calgary
	J. Raffa	Red Deer
	A. O. Mickelson	Wetaskiwin
	E. E. Kitchen	Edmonton

### GENERAL REVIEW

For the poultry industry in general, and particularly for the producers, the 1950 season was indeed a very abnormal one, with prices ranging from an all time low to an all time high. Following the termination of the British contract and the collapse of the then existing price structure, the action of the Dominion government in allowing several weeks to lapse before announcing their support price program seriously affected early chick orders as producers were reluctant to arrange for their annual pullet replacements unless some price guarantee was in sight. However, the announcement of a support price of 38c per dozen basis Grade A plus storage charges while having a stabilizing effect on the industry resulted in larger numbers of late hatched chicks being reared than is desirable or profitable.

Efforts were made across the entire Dominion to encourage the greater consumption of all poultry products and to further develop our domestic market. As could be expected fewer early hatched pullets in the laying pens created a shortage of fresh eggs in the early fall with the result that all offerings, both fresh and storage, were readily absorbed by the retail trade and market conditions were such that the Dominion government was not required to take over any eggs under its policy. For that reason the producers felt justified this fall when asking for a continuance of the support price to request it be increased a further 5c per dozen. However, this request was refused and the support price for 1951 is the same as for 1950. Feed prices continue very high and indications are for even higher prices this season. This possible increase in production costs, under the present existing conditions, is not at all encouraging to the producers, many of whom may be forced to reduce their flocks. All poultry producers are being advised to make every effort to reduce production costs by constant culling and the sale of all non-producers, by carefully checking feeding and management practices, and by doing so eliminating as far as possible all waste, etc. Again it is being recommended to purchase early hatched pullets in an effort to ensure a supply of fresh eggs for the early fall market.

### EGG AND CHICK PRODUCTION

Last season chick production was down some 16% and with the result egg production was considerably lower than in 1949. There was, however, a marked improvement in quality which was very gratifying to the trade, and no doubt due to efficient feeding and management practices which are being followed. At the present time there are practically no eggs at all in cold storage.

### LIVE AND DRESSED POULTRY

The situation in regard to live and dressed poultry is vastly different than at this time last year. Reports indicate some seven million pounds

less poultry in storage than at this time last year, in fact Alberta imported some dressed chickens from the U.S.A. This season considerable interest was shown in the rearing of capons. Previously the trade had not shown too much interest along this line due no doubt to the lack of volume generally available. However, caponizing demonstrations were put on in many parts of the province by the field staff and thousands of cockerel chicks were castrated. Capons are very high quality poultry meat and practically all through the season were quoted a few cents higher than Grade A turkeys, and could become quite a competitor in the turkey market, due to desirable weight range together with the quality of meat. For this reason heavy breed cockerels were in great demand last season.

### TURKEYS

The turkey market started out at Thanksgiving quite slowly due no doubt to misguided information owing to the tremendous increase in commercial poult hatching over 1949, with a 73% increase in Alberta and over 30% increase for the entire Dominion. It was felt that there would be a record volume of turkeys for market and buyers were reluctant to quote prices. However, the fact which was not recognized was that, with the increased commercial hatching, farm hatching had been reduced to a minimum, in fact the small farm flock has practically disappeared and the final picture was that instead of an increase in turkeys, marketings were about 7% below last year's. This situation no doubt had a stimulating effect on prices and these prices continued to rise through the entire marketing season. The prices obtained left a satisfactory margin of profit for the producer, although the price differential on heavy weight birds is still very difficult to understand and is somewhat discouraging as there are seasons of the year when the heavy turkey is the premium turkey. Present indications point to a keen demand for poults this season. Some hatcheries report they are entirely booked up already.

### TURKEY BANDING AND APPROVAL POLICY

The change and development started in the turkey industry a few years ago is steadily increasing. Specialized turkey breeding farms are springing up all over the province. At the present time large numbers of turkey breeders keep from 100 to 2,000 turkey hens each year for the production of eggs and pouls for the turkey grower. Good buildings are being erected and efficient feeding and management practices followed with the result early eggs can be produced and pouls are available to the grower at all times. The banding policy is much the same as last year. Only one grade of bird, Grade A, is banded emphasizing selection, market type and requirements. All outstanding birds in any flock are marked with a plain green band in addition to the regular band for the breeder's own identification purposes. Last season 15,000 breeding hens were banded and while final figures are not quite complete for this season it is expected the numbers will be greatly increased.

### POULTRY APPROVAL AND BANDING POLICY

In order to meet the demand for chicks last year, one and a half million eggs and one-half million chicks were imported. When restrictions were placed on the importations of hatching eggs early this season it was necessary to endeavor to ensure the Alberta hatcherymen of an egg supply. To accomplish this it would be necessary to test at least 50,000 more breeding birds and deviate slightly from the regular requirements of flock approval. As with the turkey work final figures are not available now but there has been a very substantial increase over last year.

## HATCHERY SHORT COURSE

In co-operation with the Department of Veterinary Services a two day hatcherymen's short course was held at the Provincial Laboratory in November. This short course was the first of its kind ever held in Canada and the response was all that could be desired. Practically every hatcheryman in the province was in attendance, together with Dominion and Provincial officials, including a number from Saskatchewan. Illustrated talks on poultry diseases and their control were given by Dominion and Provincial Veterinarians. Hatchery sanitation and management, methods of fumigation for all types of machines, fumigation and handling of eggs, the danger of overcrowding when brooding chicks, the dangers from started chicks, in fact all matters pertaining to the successful operation of a hatchery and the production of strong healthy chicks, came up for a general discussion. In addition all present were taken on a tour of the new laboratory, which is one of the very best of its kind in Canada, and the work being done by the various veterinarians in charge was explained fully by Dr. Ballantyne and Dr. Bigland.

At the conclusion of the course Mr. Pringle, on behalf of the Alberta hatcherymen expressed to the Provincial government, and to all who had made the short course possible, appreciation for the valuable instruction that had been given, and by unanimous vote requested that this be made an annual event.

## NEWCASTLE DISEASE

A serious epidemic of Newcastle disease broke out in B.C. in the early spring. Efforts were made by the Dominion Government Health of Animals Branch to bring it under control by what is known as the "slaughter policy". However, the disease spread so rapidly, particularly through the Frazer valley that this policy proved very ineffective and approximately one-half million birds were slaughtered, with a loss to the poultry industry in B.C. of some five million dollars. The possibility of this disease spreading to Alberta caused grave concern among all who were interested in the poultry industry, and requests were made that every precaution possible should be taken in order to avoid this happening. On November 17th an Order-in-Council was passed restricting the importations of eggs, chicks, breeding stock, and dressed carcasses, from any infected area.

Unfortunately, eight cases of Newcastle disease developed during the late summer in various parts of Alberta which changed the status considerably. However, following consultations between Hon. H. Bowman, Minister of Agriculture for B.C., and Hon. D. A. Ure, Minister of Agriculture for Alberta, all restrictions were removed on November 30th and interprovincial trade returned to normal. In order to ascertain how far spread this disease may be in Alberta, in co-operation with Dominion Veterinary Services, a tube test of 500 flocks will be undertaken. This work is being done at the present time.

## PROVINCIAL POULTRY PLANT

For years the Provincial government Poultry Plant at Oliver has specialized exclusively in R.O.P. S.C. White Leghorn chickens and Bronze turkeys, providing high class breeding stock at moderate cost to the small flock owner. It is one of the largest R.O.P. entries in Canada and is making some enviable records with 85% of the birds certifying. This sea-

son in order to introduce some new blood into the flock, one cockerel was purchased from an outstanding breeder in Saskatchewan. This bird was mated to fifteen select hens and the female progeny are all being trapped and a careful record kept of their performance. Seven choice cockerels were retained from this mating for future use, providing the pullet record is satisfactory. With the Oliver Farm strain of Leghorn well established within the province it was felt that a similar service for the supplying of breeding stock should be made available to breeders of other varieties of poultry. With this in mind 200 individual pedigree New Hampshire pullet chicks and 50 cockerels were imported to form the nucleus of a New Hampshire flock. These chicks were carefully checked each week for early maturity and fast feathering, then heavily culled before going into the breeding pens. 96 of the best of this flock have been put on R.O.P. and from this start it is hoped to be able to supply some high quality New Hampshire cockerels to the breeders of this variety.

### BRONZE TURKEYS

In accordance with popular demand and premium market requirements the original program for turkey selection is being continued. A medium size turkey with hens weighing up to 16 pounds and toms from 22 to 25 pounds is being produced. This season after making the final selection of the breeding birds the balance of the flock was marketed and graded 86% Grade A, 52% of which were Grade A Special. Considering the small flock from which to select this is a very good showing. After several experiments pertaining to rearing of poult, the system that has been found to be most satisfactory is the one that is being used at the present time, that is, to floor brood the poult for about eight weeks using a good poult starter for feed. For a further four weeks the birds are provided with verandas and a gradual change is made in feeding until they are on a growing mash. This gives them plenty of time to harden off and become accustomed to outside temperatures and feed changes, after which the birds are put on a good alfalfa range where they are fed growing mash and grain until maturity. Veranda rearing for the entire period increases the costs of production. There is also the danger from stampeding and very often the bad habit of feather picking develops. There is, however, one advantage and that is there are no losses from predatory animals. Complete disease control is obtained, and where space is very limited turkeys can be reared successfully on verandas.

Due to the necessity of having to guard against the possibility of disease being brought to the Provincial Poultry Plant visitors were not allowed to visit the Plant this season as has been the custom in the past. It is hoped, however, that during the 1951 season it may be possible to again extend to all interested a hearty welcome to visit the Provincial Poultry Plant.

### JUNIOR CLUBS

In co-operation with Mr. E. H. Buckingham, District Agriculturist, Vermilion, two Junior Turkey Clubs were supervised this season, one at Vermilion and one at Marwayne. Achievement days for these clubs were held on December 13th and 14th respectively and were an outstanding success. At the Vermilion achievement day, which was very well attended by the public, 79 dressed and 22 live turkeys were on display. The dressed birds, a large percent of which graded A Special, were judged by Mr. C. Sampel of the Dominion Poultry Marketing Services. The first prize young tom, which scored 100 points, was later purchased by Canada

Packers Limited and put on display in Edmonton, and then donated to the Colonel Mewburn Hospital for Christmas. The birds were later auctioned off and brought an average of \$11.00 each. The highest price bird brought \$1.20 per pound. It was the first year for the Marwayne Club which had fewer members. However, their exhibit of about forty birds was indeed a credit, being well grown, showing a good finish, and nicely displayed. The first prize young hen brought the record price of \$1.30 per pound, and all the birds sold brought a considerably higher price than was being offered on the market. A great deal of interest was shown and support given to these clubs by the residents of both communities.

### STAFF ACTIVITIES

In addition to the regular supervision of nearly 1,000 approved poultry and turkey flock owners inspectors held a large number of culling and caponizing demonstrations in various parts of the province. Many of these demonstrations were sponsored by local organizations such as the F.U.A., Women's Institutes, Ladies' Aids, etc., and were all well attended and appreciated. It is at gatherings of this kind that contacts with flock owners are made that cannot be made in any other way to discuss poultry problems. For the flock approval and blood testing season it was necessary to engage 18 extra inspectors in order to complete this work before the end of the year. Due to the outbreak of Newcastle disease flock approval work was held up a little to take extra precaution in sanitation and fumigation of both equipment, clothing, and even the cars used, in order to ensure against the spread of the disease by members of the staff when travelling from place to place. Every man was supplied with coveralls, sprayer, fumigants and disinfectants, etc., and was instructed by Dr. C. H. Bigland, Poultry Pathologist, as to their use. As has been the custom in the past seasons, a school for these inspectors was held at the Oliver Farm in order that they all could become familiar with the various breeds of poultry with which they may come in contact while on their work, and also that a uniformity of opinion may be obtained as to the requirements of flock approval. For this work a number of birds of all breeds are reared at the farm and disposed of later in the season.

### ROYAL WINTER FAIR

The Alberta poultry exhibit to the Toronto Royal Winter Fair this season was confined to dressed birds as it was deemed advisable not to assemble live birds owing to the disease hazard. All the exhibits shown took most of the top honors in their respective classes.

### PRODUCTION OF CHICKS

	1949	1950
Breeder Hatcheries operating in Alberta .....	15	9
Commercial Hatcheries Operating in Alberta.....	47	51
	62	60
Total Incubator Capacity of these hatcheries.....	3,736,510	3,862,436
Increase in Incubator Capacity over 1949—3.3%		
Chicks Hatched in Breeder Hatcheries .....	239,119	157,822
Chicks Hatched in Commercial Hatcheries .....	6,595,620	5,783,170
	6,834,739	5,940,992

Decrease in Chick Production under 1949—9.9%

### HATCHABILITY

	1949	1950
All Approved Hatcheries (Average) .....	67.8%	67.8%

## DEPARTMENT OF AGRICULTURE

## CHICKS IMPORTED INTO ALBERTA

From:	1949	1950
British Columbia .....	1,120,041	406,044
Saskatchewan .....	146,712	160,535
Manitoba .....	186,910	94,162
Ontario .....	19,859	24,247
Maritimes .....	655	No Record
	1,474,087	684,988

Decrease in chicks imported into Alberta—789,099—53.5%

## CHICKS EXPORTED FROM ALBERTA

To:	1949	1950
British Columbia .....	78,085	93,815
Saskatchewan .....	58,612	54,384
Manitoba .....	4,177	750
N.W.T. .....	200	.....
Yukon Territory .....	1,240	150
	142,314	149,099

Increase in Exported Chicks—6,785—4.07%

## CHICKS DESTROYED BY APPROVED HATCHERIES IN ALBERTA DURING 1950 HATCHING SEASON

	1949	1950
Light Cockerels .....	324,020	272,753
Heavy Cockerels .....	8,261	6,850
Mixed Chicks .....	3,264	22,765
Pullets .....	.....	2,175
	335,545	304,043
Decrease in Chicks Destroyed—9.3%		
Total Production of Chicks in Alberta:		
From Alberta Flocks .....	4,830,405	.....
From Eggs Imported (67.8%) .....	1,110,587	5,940,992
Chicks Imported .....		684,988
Less—Chicks Exported .....	149,099	6,625,980
Chicks Destroyed .....	304,043	453,142
Chicks Remaining in Province .....		6,172,888

TABLE I

Year	Method of Testing	No. of Flocks	No. of Birds	% Reaction
1930-31	Tube Agglutination .....	148	18,608	20.2
1931-32	" "	232	31,177	12.9
1932-33	" "	188	26,381	8.6
1933-34	" "	205	33,295	7.3
1934-35	" "	645	104,858	11.2
1935-36	" "	615	94,536	5.5
1936-37	" "	815	136,228	5.5
1937-38	" "	677	108,908	4.8
1938-39	" "	534	92,355	4.51
1939-40	Whole Blood .....	437	80,927	5.1
1940-41	" "	412	91,868	2.6
1941-42	" "	510	120,198	2.12
1942-43	" "	460	120,841	0.85
1943-44	" "	664	165,903	0.716
1944-45	" "	694	198,877	0.736
1945-46	" "	632	186,992	0.798
1946-47	" "	792	248,666	0.526
1947-48	" "	862	276,716	0.645
1948-49	" "	708	231,255	0.234
1949-50	" "	826	255,561	.198

NOTE: The above reaction is on the first test. Some provinces show a lower reaction, but these are on the final tests where over 2% reaction required a second and sometimes third and fourth re-tests.

## TOTAL NUMBER OF WHOLESALE POULTRY PREMISES OPERATING IN ALBERTA

Year	Fully Registered	Tentative Registration	Total Operating
1944.....	—	—	160
1945.....	—	—	188
1946.....	177	12	189
1947.....	168	17	185
1948.....	167	3	170
1949.....	163	3	166
1950.....	167	—	167

**DEVELOPMENT OF HATCHERIES AND CHICK SALES  
SINCE 1936**

Year	Egg Setting Capacity	% of 1936	Chicks Hatched	% of 1936
1936.....	924,300	—	1,028,881	—
1937.....	1,036,526	112.1	1,068,056	103.8
1938.....	1,033,906	111.9	1,171,082	113.8
1939.....	1,052,759	113.9	1,394,194	135.5
1940.....	1,203,368	130.2	1,538,597	149.7
1941.....	1,269,117	137.3	1,939,052	188.4
1942.....	1,407,280	151.2	2,631,468	255.8
1943.....	1,408,070	152.3	3,607,372	250.6
1944.....	2,102,434	223.1	5,476,476	532.3
1945.....	2,208,938	238.9	4,917,366	477.9
1946.....	2,445,750	264.6	5,711,423	555.1
1947.....	3,404,773	390.0	7,452,785	724.3
1948.....	3,638,704	393.7	6,265,620	608.9
1949.....	3,736,510	404.2	6,595,620	641.0
1950.....	3,862,436	417.9	5,940,992	577.4

**PROVINCIAL POULTRY PLANT R.O.P. 1949-1950 ENTRY**

Birds entered .....	444	
Birds certified .....	377	85%
Average production—194*.		
Average egg weight—25.2 ozs.		
Dead and culled .....	53	12%
Progeny Test—		
Males Passed .....	4 out of 5	
Females Passed .....	35 out of 45	

\*Trapping period was 305 days.

**SUMMARIZATION OF HATCHING AND SALES OF LEGHORN STOCK**

Hatched—			
S.C.W.L.	R.O.P. Pedigree Chicks .....	6,867	
	R.O.P. Sired Chicks* .....	601	
	Total .....	7,468	
Sold—			
R.O.P. Cockerel Chicks .....	985		
Pullet Chicks .....	500		
Total .....	1,485		
Mature Males .....	276		
Mature Females .....	1,247		
Total .....	1,523		
Hatching Eggs .....	15,840		

## REPORT OF AGRICULTURAL EXTENSION SERVICE

F. H. Newcombe	Director, Extension Service
S. S. Graham	Supervisor of District Agriculturists
Mrs. V. G. Macdonald	Supervisor, Women's Extension
Miss B. J. Lewis	Extension Nutritionist
Miss C. Judson	Extension Home Designer
C. A. Cheshire	Extension Engineer
E. B. Swindlehurst	Extension Editor
R. E. English	Statistician
T. Kilduff	Research Extension Officer

### GENERAL

Once again it becomes necessary to summarize the efforts and accomplishments of this Branch which are devoted to the improvement in agricultural practices and in the life and living of farm people.

During the year staff changes have been at a minimum, with the exception of District Home Economists which are reported elsewhere.

Mrs. M. E. Bacon, who was carrying on the limited work being done in agricultural statistics, resigned to take a position with the University of Alberta. She was succeeded by Mr. R. E. English, former Supervisor of Agricultural Information, who now assumes the duties of Statistician.

Some of the duties previously performed by Mr. English have now been assumed by Mr. Swindlehurst, who has also taken charge of editing, preparation and distribution of agricultural bulletins.

Mr. Kilduff, formerly District Agriculturist at Thorsby, has now completed his first full year as Research Extension Officer at Lethbridge. Mr. Kilduff's duties are to interpret the work of the Science Service Laboratory and to endeavor to take up some of the lag which has occurred between experimentation and the publication of results.

Progress and extension of irrigation in Southern Alberta, particularly in the St. Mary River Development Project, together with the colonization of lands in that area were believed to justify the appointment of an Irrigation Specialist. Mr. Cyril J. McAndrews was engaged for this work and it is intended that he will carry on survey work for the running of ditches and leveling of land. The work of Mr. McAndrews for the past season is reported together with the District Agriculturists, in which division he is presently placed.

### AGRICULTURAL SOCIETIES

During 1950 Agricultural Fairs were conducted by Agricultural Societies and Exhibition Associations as indicated hereunder.

Class "A" Fairs—Calgary, Edmonton.

Class "B" Fairs—Camrose, Lethbridge, Lloydminster, Red Deer, Vegreville, Vermilion.

Class "C" Fairs—Benalto, Donnelly-Falher-Girouxville, Goose Creek, Lamont, Lousana, Medicine Hat, Olds, Priddis-Millarville, St. Paul, Westlock, Wetaskiwin, Wildwood.

An appreciable increase is noted in the total expenditures of most Agricultural Societies, particularly those in Class "B". It may be assumed that this increase reflects, to some extent, the increase in the cost of all goods and services, though a portion of it does reflect an increase in the expenditures for the development of grounds and buildings.

In addition to the Agricultural Fairs, other activities authorized by the Act were conducted as shown below.

Tillage Competitions .....	14
Seed Fairs .....	2
Horticultural Shows .....	2
Livestock Sales .....	2

A number of Agricultural Societies have been inactive for varying lengths of time. It was decided that it would be advisable to disorganize these Societies and accordingly they were so disorganized by Ministerial Order dated April 18th, 1950.

Mr. P. W. Johnson, formerly Secretary to the Department, was appointed as liquidator.

As a matter of record the Societies so liquidated are listed hereunder.

- Crossfield Agricultural Society
- Gleichen Agricultural Society
- Jas. River Agricultural Society
- Munson Agricultural Society
- Busby Agricultural Society
- Chauvin Agricultural Society
- Colinton Agricultural Society
- Edson Agricultural Society
- Entwistle & Pembina Valley Agricultural Society
- Greencourt (Kitchener) Agricultural Society
- Leduc Agricultural Society
- Mossdale Agricultural Society
- Morinville Agricultural Society
- Rochester Agricultural Society
- Sangudo Agricultural Society
- Stony Plain Agricultural Society
- Thorhild Agricultural Society
- Vilna Agricultural Society
- Wainwright Agricultural Society
- Delia Agricultural Society
- Empress Agricultural Society
- Carmangay Agricultural Society
- Granum Agricultural Society
- Macleod Agricultural Society
- Bow Valley (Bassano) Agricultural Society
- Brooks Agricultural Society
- Etzikom Agricultural Society
- Patricia Agricultural Society
- Berwyn Agricultural Society
- Peace River Agricultural Society
- Waterhole Agricultural Society
- Coronation Agricultural Society
- Innisfail Agricultural Society
- Innisfree Agricultural Society
- Mannville Agricultural Society
- East Alberta Agricultural Society (Provost)
- Killam Agricultural Society

## FARM LABOUR

Under the provisions of the agreement between this Province and the National Government this Branch has continued its work in the placement and supervision of farm labour. The slight downward tendency in farm wages which was noted last year is not conspicuous this year and in the main these wages show little change. Contracts for sugar beet workers were renewed on the same basis as in 1949.

(1) Displaced Persons. Other than for sugar beet work and a few domestics the number of Displaced Persons have almost discontinued. The following indicates the number placed.

D.P. Single Males .....	1
D.P. Married Couples .....	6
D.P. Female Domestics .....	16
Miscellaneous Placements and Transfers .....	152
Sugar Beet Workers .....	554
 Total.....	 729

The rather late arrival of sugar beet workers this year is attributable to late filing of applications by beet growers. The growers evidently believed that ample labour would be available and this conclusion was not supported by later developments.

Immigration of Displaced Persons under church sponsorship resulted in arrival of these people as indicated hereunder.

Baptist World Alliance Immigration .....	Single Males	3
Catholic Immigrant Society .....	Domestics	3
Canadian Lutheran World Relief .....	Single Males	1
.....	Domestics	1
.....	Single Males	6
.....	Married Couples	4
.....	Families	5
.....	Domestics	4
Canadian Mennonite Board of Colonization.....	Single Males	2
.....	Married Couples	1
.....	Families	2

(2) Ontario Farm Workers. The demand for farm workers to be dispatched to the Ontario harvest was greater than that of a year ago, but owing to delayed seeding operations in this Province it was not possible to find sufficient workers to meet the demand. The result was that exactly the same number of workers, namely 304, was dispatched as in 1949.

(3) Prairie Farm Workers. Notwithstanding the damage to prairie crops by frost and hail, there was a keen demand for harvesters and 743 men were brought in from outside the Province, principally from Eastern Canada. The harvesting season was a most discouraging one from the standpoint of the workers as well as the farmers, and many returned to the east after only a few days of actual harvesting employment.

(4) B.C. Fruit Pickers. No request was received for women and girls to pick fruit in B.C. during 1950 and accordingly none were dispatched.

(5) General. In addition to the placements indicated above 907 general farm hands have been placed in employment and 1096 harvest hands, other than prairie farm workers, were located in employment. Assistance has been given in the placement of 383 persons in industries other than agriculture. The total number of visits and investigations necessary to placement of Displaced Persons of all kinds has been 650.

## MASTER FARM FAMILY PROGRAM

The number of nominations under this program has been somewhat reduced from last year; 52 nominations were filed with District Agricul-

turists as compared with 98 in 1949. The procedure was similar to last year. The score card was changed slightly in the light of the previous year's experience.

District Agriculturists and Home Economists again served on district committees, together with farmers and farm women.

The farm families chosen for this distinction in 1950 are listed hereunder.

Emile Cammaert Family, Rockyford, Alberta.

Charles J. Kallal Family, Tofield, Alberta.

Roy Ballhorn Family, Wetaskiwin, Alberta.

E. S. Parsons Family, Boyle, Alberta.

Fred Labrecque Family, Spirit River, Alberta.

It is believed that the somewhat smaller number of nominations this year reflects a better understanding on the part of farm people generally as to the requirements under this program. There is some evidence that the program generally is acting as a stimulus toward improved farm practice, and that a number of families hope to qualify in future years.

## PRAIRIE RURAL HOUSING COMMITTEE

The work of the Prairie Rural Housing Committee has been continued through the past year, and the Government and the University have been represented on the committee.

Project 1. Home Planning and Design. The supply of the interim bulletin "Ten Farm Houses" is now practically exhausted throughout the Prairies. Research work on this project is now completed and the final report of the Committee in the form of a bulletin will, it is expected, be printed before April 1, 1951.

Project 2. Research in this project is completed and it is probable that the results will be made available in the form of two bulletins, namely "Houses For Cold Weather" and "Costs in House Construction". Under this project also work has been done on "Fire Protection" and it is probable that a bulletin will be issued in 1951.

Project 3. Water and Sanitary Facilities. Bulletins on the "Treatment of Farm Water Supplies" were printed and distributed during 1950. The bulletin on "Farm Sewage Disposal Systems" has now been completed and is expected to be printed about February 1st.

Project 8. Remodeling Farm Homes. This project will now include, in addition to "Remodeling Farm Homes," "The Planning of Kitchens and Utility Rooms". Work on this project is practically completed and the report in bulletin form will issue in 1951.

## STATISTICS

The Statistics Division has two principal functions. First, it assists the Agriculture Division of the Dominion Bureau of Statistics in its work in assembling and analysing statistical data pertaining to agriculture in the Province. Secondly, the Division prepares and distributes statistics on Agriculture in Alberta in a form suitable for use by farm and business organizations, or individuals. The latter include regular crop reports in the growing season, and the latest survey or census information available on live stock populations, areas under cultivation and devoted to principal crops, and related data.

## AGRICULTURAL PRODUCTION

The total improved land devoted to the production of principal crops in 1950 was 14,430,600 acres as compared to 14,037,100 in 1949. The area in fallow was 5,950,000 as against 6,116,000 in the previous year.

Preliminary estimates of the value of field crops production for 1950 total \$300,195,000. This is up from last year's figure of \$288,261,000. However, since the 1950 estimates include only initial payments on wheat, oats, barley and sugar beets, they are subject to considerable revision upward. Should threshing of the crop remaining be satisfactorily completed in the spring, there is little doubt that the value of field crops produced will be increased considerably over the present figure.

A number of minor crops, the value of which is not included in the above estimate, are growing in importance in Alberta. Preliminary estimates place the value of forage crop seeds produced in 1950 at \$4,750,000. The production of specialty crops under irrigation is expanding each year, particularly in relation to the vegetable canning and freezing industries. In the Lethbridge area, 14,000 acres planted to commercial mustard seed yielded a crop valued at about \$350,000.

The number of cattle and sheep marketings for the year was down for 1949. Owing to higher prices, however, about one-third and one-fifth up for cattle and lambs respectively—gross returns to producers will be higher. Little change is shown in returns from swine, since higher marketings were associated with somewhat reduced prices for dressed hogs.

The estimated production of milk for 1950 is slightly higher than for 1949. In the sale and manufacture of milk and milk products, increases in the sales of fluid milk and cheese production, more than make up for losses in the manufacture of butter, ice cream and evaporated milk.

Alberta's chick hatchings were down about 10 per cent, while imported chicks were reduced 54 per cent. The estimated number of domestic fowl on farms at June 1 showed a corresponding decrease. At years' end, however, egg production almost equalled that for 1949. The effect of lower prices of eggs on returns to poultrymen was accentuated by a rise in the cost of feed.

Cash income from the sale of Alberta farm products for 1950 is estimated at \$362,996,000. This was down considerably from the record \$460,218,000 achieved in 1949. A substantial factor in the situation was owing to a below normal carryover of grains from the light 1949 for marketing in 1950. Figures covering cash income for the last 3 months of the year were affected by the incomplete harvest, slow marketings owing to low quality grains and reduced initial payments under wheat and coarse grain pools.

Nevertheless, study of the production tables shows that the value of agricultural production for the Province in 1950 is higher than indicated by farm cash income figures. The inference is that stocks of saleable commodities in farmers' hands were higher at the end of the year than at the beginning.

## RADIO AND EDITORIAL

The Alberta Farm and Home Forum, sponsored by the Faculty of Agriculture, University of Alberta and the Alberta Department of Agri-

culture, was continued throughout the year. It provides an opportunity for constant radio contact with farmers and homemakers on matters of special interest to rural listeners. Every Monday, Wednesday, and Friday from radio station CKUA, speakers from the Alberta Department of Agriculture and the Faculty of Agriculture provide information on a variety of topics designed to encourage improved farm and home practices.

Each program consisted of a short talk by a specialist on the subject under discussion, followed by Farm and Home notes prepared and presented by the Agricultural Extension Service. On the first Monday of each month the program took the form of talks to junior club members by the Supervisors of Junior Activities of the Alberta Department of Agriculture. On the second and last Mondays, members of the Home Economics Service dealt with problems and management of the rural home. Throughout the year 153 talks were presented on the Farm and Home Forum, 89 of which were delivered by members of the Alberta Department of Agriculture staff.

Bulletins, circulars, and leaflets provide a handy source of reference, and the demand for this type of extension activity continues strong. Over 200,000 of these publications were distributed by the Extension Service during 1950. In addition to requests from farmers and homemakers, numerous enquiries were received from teachers and students for agricultural information with reference to science studies in the junior high schools. Bulletins prepared for the information of the farmer are not usually satisfactory for study at this level, but every consideration was given to these requests and consultations have been held with interested educationists with a view to meeting this need.

Agricultural bulletins and circulars, printed or reprinted in 1950, included Farmstead Planning, Coccidiosis in Poultry, Production of Quality Market Eggs, Treatment of Farm Water Supplies, Guide to Potato Production Under Irrigation, Field Crop Varieties, Horticultural Guide, and Control of Couch Grass. Circular No. 5, Fertilizers in Alberta, has been revised and is now in the hands of the printer.

Under the heading "Farm Notes," timely items of interest to farmers and homemakers were released weekly during the year. Prepared primarily for use by the daily, weekly, and farm papers, their frequent publication and appearance on the farm broadcasts of the province offers an indication of the interest with which they are received. The whole-hearted co-operation of the various specialists of the Department in making this information available has been gratifying. During 1950, fifty-two issues of Farm Notes were released containing a total of 267 items.

#### RESEARCH EXTENSION OFFICER

During 1950 ten short articles were prepared for press release or for information of Department personnel. It has been found that, aside from the reading involved in search for material and in preparation of articles, much time must be devoted to "background" reading and study in several branches of science. One radio interview was delivered, and six of the above-mentioned articles read on the local farm service broadcasts.

Correspondence involved in answering direct queries from farmers and District Agriculturists was not heavy, comprising in all only about thirty items. Other direct agricultural queries, by phone and personal interview, numbered about twenty.

Early in the year talks were delivered at the Agricultural Short Courses held in Lethbridge, Vulcan and Macleod. Eight of the field days held annually on the District Experimental Sub-stations supervised from the Lethbridge Experimental Farm were attended and addressed. In addition, short talks were delivered at five Junior Club meetings. Seven meetings or conferences of a technical nature and six other agricultural meetings or tours were attended. Attendance at meetings totalled approximately 1,400. Additional contacts, estimated to be about 200 in number, were made in conducting visitors, singly and in groups, around the Science Service centre.

### AGRICULTURAL ENGINEERING

Two items of major importance conducted during the year were the tillage machinery events and the forage seed harvesting investigations. The tillage machinery events consisted of 22 tiller competitions, 37 tillage machinery field days, 4 tillage machinery demonstrations and 1 brush breaking competition. Total attendance at these gatherings exceeded 15,000, with an average attendance at the competitions of 550 and at the field days of 65. Approximately 200 witnessed each of the tillage machinery demonstrations, a new venture this year, and 120 attended the brush breaking competition.

Forage seed harvesting investigations were carried out in collaboration with the Field Crops Branch, Department of Agriculture, and the Department of Plant Science, University of Alberta. The two areas selected for the work were Westlock and Bonnyville. Tests to indicate harvesting losses of alsike, altaswede and sweet clover were made in the first mentioned district, while alfalfa seed losses were checked in the latter. Threshing and screening of samples is being carried out at the Plant Science Laboratory at the University. In spite of poor harvesting weather nineteen machines were checked with sufficient detail to indicate where the large losses of forage seed actually occur. In conjunction with this work, a vacuum pickup has been developed to operate behind and under the combine knife. The only opportunity to test this attachment was during very poor harvesting weather, but results obtained were promising enough to warrant further studies along this line.

Two very successful haying machinery field days were conducted, the first in collaboration with the Department of Plant Science, University of Alberta, at their Breton plots, and the second at Plamondon. Attendance at each was over 250.

In addition to the above listed activities, a discussion of some phase of Agricultural Engineering was on the program at eleven short courses, nine evening meetings and one boys' camp. Seven radio talks over the Farm and Home Forum were given during the year and three records were cut at CBC for use over the CBC western network. Fourteen items were prepared for "Farm Notes".

The bulletin "One Way Disk Maintenance and Operation" was revised and reprinted, and material for a new bulletin on Dairy Barns has been collected over the past year. This is now being prepared.

During the year eleven farms were visited for the purpose of farmstead planning and four farms were surveyed for drainage or irrigation systems. Approximately thirty farms were visited to advise on building construction, ventilation systems, machinery adjustment, and water or sewage disposal systems. In addition to these personal contacts, over four

hundred and fifty inquiries regarding some aspect of construction or mechanization were answered by letter, while pamphlets or bulletins were forwarded to an even greater number.

Assistance in field work of this Division was rendered by the under-mentioned:

Mr. S. C. Acheson, Vermilion School of Agriculture, Vermilion.

Mr. F. F. Parkinson, Field Crops Branch, Department of Agriculture, Edmonton.

Mr. B. T. Stephanson, Agricultural Engineering Department, University of Alberta, Edmonton.

Mr. J. K. MacKenzie, Institute of Technology and Art, Calgary.

Mr. J. R. Reid, Institute of Technology and Art, Calgary.

Mr. D. T. Anderson, Experimental Farm, Lethbridge.

## DISTRICT AGRICULTURISTS

The District Agriculturist Service has expanded somewhat during 1950 and now includes 38 offices served by 43 District Agriculturists and Assistants.

### OFFICES AND STAFF

M. D. Shemeluck resigned as District Agriculturist at Smoky Lake and he was succeeded by Fred Strashok.

K. H. Walker was transferred from Youngstown to fill the vacant office at Strathmore. The Youngstown office was taken over by J. H. Moore.

A new office was opened at Hanna with W. J. Perkins in charge.

Mr. G. A. Ross was transferred from Assistant at Athabasca to Assistant at St. Paul.

The following Assistant District Agriculturists were appointed:

H. J. Fulcher at Edmonton

E. A. Chisholm at Red Deer

J. B. Gurba at Vegreville

J. H. Moore at Youngstown

W. J. Perkins at Hanna

F. L. Paquin at Falher

R. A. Simmons at Lethbridge

Fred Strashok at Smoky Lake

Cyril J. McAndrews, Irrigation Specialist, Lethbridge

Forty-three D.A.'s and Assistants serve approximately 90,000 farmers or an average of 2,300 farms to be served by each. Obviously it is impossible for District Agriculturists to visit all of these farmers each year on their own farms. They do, however, make contact with a large percentage of these farmers through office calls, public meetings, field days, demonstrations, correspondence, bulletins, newspapers and radio releases. It is still fairly obvious that the progressive farmers are the ones who make the greatest use of the service and that we are not yet reaching enough of the farmers who most need help.

A primary objective has been to help farm families to improve their living conditions by actually implementing the broad principles of the conservation of our agricultural and human resources. It is felt that the Service

is working toward this goal and has made a measure of progress in this direction during 1950. Progress can only be measured over a period of years. Moreover it is not measured by production figures alone but also by a real improvement in farm living standards.

Increasing demands have made it more necessary than ever to evaluate projects from the point of priority.

## FARM MANAGEMENT

The successful farmer of today must be able to plan his production over a period of years in harmony with the principles of conservation farming and to co-ordinate this production with long term market requirements. Nearly every District Agriculturist has one or more farmers in his district working with him on a complete balanced farm plan. Such plans include every phase of soil conservation; production of both field crops and livestock, labour requirements and farm accounts; all worked out for a period of years.

It is gratifying to record an increasing use and recognition of this program by farmers in 1950. Complete farm plans involving all phases of the farm program have been prepared for 74 farmers. Partial farm plans including crop rotations and some other phases of a balanced farm program have been prepared for 510 farmers. Complete cost accounts have been set up or assistance given in their preparation for 421 farmers. A total of 200 farm management meetings were organized and 1,858 farmers were otherwise assisted with problems in this field through farm visits, office contacts or correspondence.

## SOIL CONSERVATION

District Agriculturists have stepped up their activities in soil conservation programs by getting farmers to participate in 677 special soil conservation projects and in organizing 264 demonstrations which were observed by 3,992 farmers. Among these projects are included the save the soil competitions, better farming competitions, regrassing projects and trash cover demonstrations. Soil conservation meetings totalling 258 were attended by over 14,000 persons. In addition 3,815 persons were assisted with general information or advice on soil conservation.

## WEED CONTROL

To aid and assist farmers to carry on weed control programs 143 seed cleaning plants were inspected, 10 community seed cleaning plants assisted in organization, construction and operation and 52 farm plants given some form of help.

A total of 50 weed control demonstrations or field days have been held with a total attendance of 11,979 farmers. Through office calls, farm contacts or correspondence, 3,876 farmers were given information or advice on weed control problems.

## CROP IMPROVEMENT—GRAIN

Constant need for farmers to keep informed on the new and improved varieties of grain or the adaption of old varieties to new uses has been given attention by the District Agriculturists through the Department's crop improvement policies. Through these policies 65 plots

of new or improved varieties of grain have been laid down and 43 field days, attended by a recorded 3,397 farmers, were arranged for farmers to observe and discuss the results. They were instrumental in distributing 27,644 bushels of registered seed and over 350,000 bushels of suitable quality commercial seed. Crop inspections were made on 173 farms with respect to the registration or suitability of the crop for seed and 3,351 farmers were otherwise assisted through correspondence, farm visits or office calls.

### CROP IMPROVEMENT—FORAGE

Forage crops are considered the key to a well balanced farm practise in most areas of the Province and these crops are becoming increasingly important as the need for conservation farming is recognized. District Agriculturists properly spend considerable time and effort promoting the use of forage crops in the farm economy.

Farmers participated in laying down 197 forage crop plots either for seed production or demonstration purposes. Field days arranged on 15 occasions enabled 1,562 farmers to observe the results.

Improved cultivated pastures are now being promoted as crops comparable as revenue producers with the other crops grown. As a means of stimulating the use of improved pasture grasses 233 demonstration pastures were laid down on farms throughout the Province. In addition 3,369 farmers were given advice or information through farm or office visits or correspondence.

### PLANT PESTS AND DISEASES

These hazards to crop production can assume serious proportions at any time and District Agriculturists are ready to give assistance and direction to the necessary control. Outbreaks of insect pests or plant diseases are usually regional in nature and often necessitate the spending of considerable amount of time by District Agriculturists in the territories concerned. During 1950 the control of grasshoppers, wire worms and the sweet clover weevil were the insects requiring a considerable measure of control. Bacterial ring rot in potatoes continues to be a serious potato disease particularly in the southern part of the Province and District Agriculturists in this area spend considerable time assisting in the Department's control program.

Forty-six demonstrations were given covering various phases of the control of plant pests and diseases and these were observed by an estimated 837 farmers. Specimens numbering 222 were forwarded for farmers to plant pathologists or entomologists. In addition 3,092 farmers were otherwise assisted with information or advice through office or farm calls or correspondence.

### LIVESTOCK IMPROVEMENT

Efforts have been continued throughout 1950 to improve the quality and husbandry practices in our livestock industry. Far from restricting their efforts to providing good sires, District Agriculturists are giving more attention to the management phases of livestock production including feeding, housing, health, and labour saving devices. The utilization of forage crops and improved pastures for livestock is becoming an increasingly important part of any balanced farm program.

District Agriculturists are called upon to give information and advice regarding the raising, care and feeding of poultry as well as culling the flocks and disease prevention. They are also required to give assistance in the location of suitable breeding stock and in the marketing of poultry products. A large part of this assistance is accomplished with the aid of the poultry fieldmen working directly with farmers. A number of diseased poultry have been sent to the veterinary laboratory in Edmonton for diagnosis of disease symptoms.

The following statistics taken from the District Agriculturists' annual reports summarize their activities in this field for 1950.

**LIVESTOCK PLACED THROUGH D.A.'S AND UNDER DEPARTMENTAL LIVESTOCK POLICIES**

Beef Cattle:	Male	Female
Under Policy .....	249	...
Through Office .....	469	998
Swine .....	294	503
Sheep .....	84	1,078

**SUMMARY OF LIVESTOCK ACTIVITIES**

Demonstrations (livestock) .....	62	Attendance 2,380
Livestock Meetings .....	246	Attendance 9,850
Herds culled or selected .....	14	614
Farmers assisted with Registration of Purebred Animals ..		1,166
Farmers using Dept. Dehorners .....		23
Livestock Sales Assisted .....		3,965
Persons otherwise assisted with livestock problems through office calls, farm visits or correspondence .....		

### LIVESTOCK PESTS AND DISEASES

A number of Municipal Districts and Improvement Districts have organized to control Bang's Disease through the Department's calfhood vaccination program. In some cases all calves in the municipality have been vaccinated. Veterinarians, Service Boards and D.A.'s. have co-operated to effect this control. Over 6,000 farmers have been assisted or encouraged to adopt control measures and a recorded 40,044 calves have been vaccinated through the work of these agencies. Outstanding results have been achieved in obtaining petitions for T.B. Free Areas in the Province. Thirty-four Municipal Districts, 29 Improvement Districts and one Special Area have been signed up or nearly so for inclusion in T.B. restricted areas. This achievement can best be illustrated by a statement from Director of Veterinary Services that only one M.D. and six I.D.'s. in the entire Province have taken no action to become T.B. restricted areas. Fifty-five demonstrations have been arranged for the control of livestock pests and diseases and these demonstrations were observed by 1,730 persons. To help farmers and ranchers determine the cause of losses among cattle, sheep and swine, 301 specimens were forwarded to the Veterinary Laboratory at Edmonton or at Lethbridge. An additional 3,567 persons were otherwise assisted with livestock pest and disease problems.

### DAIRYING

District Agriculturists developed 10 special projects and conducted 19 demonstrations to promote dairying on farms and to assist farmers to produce quality milk more efficiently. These demonstrations were observed by 2,317 persons. In addition 78 farmers were induced to start cow testing or to continue this worth while practice. Assistance was given to 41 farmers in culling or selecting their dairy herds. Sixty-six meetings were organized, at which dairying was the principle topic and at which

the recorded attendance was 2,528 persons. Farmers and dairymen, totalling 863, were assisted with information or advice on dairy matters through farm visits, office calls or correspondence.

### JUNIOR CLUBS

The training for citizenship of the farm boys and girls through organized club projects continues to exact a large portion of the time of this Service. Through the efforts of District Agriculturist and club leaders, 272 demonstrations were conducted on feeding, fitting, judging and training calves for shows, care and handling of seed grain plots, preparation of seed for show purposes, cow testing, culling various classes of livestock how to conduct meetings and public speaking. These demonstrations were observed by a recorded 10,407 persons including juniors, their parents and neighbors. A total of 1,084 junior club meetings were held with 20,330 persons attending. It is also recorded that 255 junior clubs were supervised and 43 junior judging teams trained for the provincial or dominion judging finals.

Closely allied with the junior club work through organized programs are a number of separate youth training activities organized by individual D.A.'s with the active participation and support of local organizations. Forty-five such special projects were organized, such as farm young people's schools, camps, visits to industrial concerns or other centres for both education and recreation. These special projects had a total attendance of 4,361 farm boys and girls.

### AGRICULTURAL SERVICE BOARDS

Since the organization of the Service Boards a far greater amount of agriculture extension work has been possible. The Service Boards with the backing of their municipal councils are becoming an increasing influence for good agriculture in the Province. The District Agriculturists enjoy a very healthy co-operative arrangement with these boards. They have jointly participated in or organized a number of projects related to sound farming practices such as weed control, soil erosion control, restoration of neglected or debilitated lands, Bang's and Tuberculosis control. They have assumed the management of 114 farms which were becoming a community menace because of lack of weed control or other serious neglect.

### FARMSTEAD PLANNING

The farm family living centres in the home and farmstead, and these have a great influence on the success of the whole farm organization. District Agriculturists with the assistance of specialists in this field have planned farmstead layouts for 108 farm families and planned shelter belts for 265 farmers. Through their offices District Agriculturists encouraged farmers to order 1,800,000 trees for shelter belts, or ornamental planting. They assisted a total of 950 farmers with other problems in this field through farm visits, office calls or correspondence.

### BEEKEEPING

Beekeepers were given assistance in ordering package bees, care of honey, production and disease control. This assistance was rendered directly by some of the qualified District Agriculturists or through the co-operation of the Apiculture Branch.

Six beekeepers' meetings were organized, attended by 335 farmers, and 267 farmers were otherwise assisted with beekeeping problems.

### AGRICULTURAL SOCIETIES

Members of the District Agriculturist staff assisted at all district fairs and gave advice on preparation of exhibits.

### AGRICULTURAL SHORT COURSES AND MEETINGS

These short courses and meetings are serving as a medium of education and inspiration to farmers and farm communities and as a means of promoting co-operation of farmers and businessmen for their common good. A total of 298 general short courses and meetings were held with a recorded attendance of 29,881 persons.

Ninety-one agricultural engineering short courses or field days were held in addition to those listed above. These dealt primarily with the operation, maintenance and proper use of farm machinery or with the construction of farm buildings and were attended by 12,249 persons. An additional 1,291 persons were given information or advice on agricultural engineering problems.

### FARM LABOUR

District Agriculturists continue to co-operate with the Dominion Department of Labour and local employment offices in the placement of farm labour and in investigation with respect to misunderstandings between the farmer and the labourer. A substantial part is also taken in the placement of Displaced Persons in agriculture and in investigations of their problems. Statistics in this field are shown earlier in this report.

### PUBLICITY

This service must use every possible means of disseminating agricultural information and to advertise meetings or events of interest to the farm public. The newspapers are used extensively, with some District Agriculturists contributing regular weekly columns to several local papers along with other special news releases. Newspaper articles or columns totalling 1,216 were issued during 1950, in addition to numerous interviews with reporters. The various radio broadcasting companies in the Province have been more than willing to co-operate with announcements of meetings or matters of concern to farmers.

### DAMS AND DUGOUTS

Assistance given in the location, planning and financing of dams and dugouts in the Peace River area was given to 145 farmers. This assistance involves the location of dugouts to adequately impound and hold water. It also involves recommendations as to size and depth for livestock to be watered, measurement of the excavation as a basis for payment of assistance for the Department and the supervision of fencing and of planting grass and trees for protection.

### MASTER FARM FAMILY

Fifty-two nominations were received by the District Agriculturists for the Master Farm Family Award. The nominees were scored by the district committees of which the District Agriculturists are members.

## IRRIGATION

An Irrigation Assistant and two temporary rodmen were added to the Extension Service this year with headquarters at Lethbridge. Their duties will be to survey and lay out the main irrigation ditches for settlers on newly developed irrigation lands in the St. Mary River Development. They will also survey contour lines and elevations as a basis for land leveling operations on these lands. As time permits a certain amount of survey work may be done on established farms in the irrigation districts. A survey of irrigable acreage and the classification of this acreage for irrigation purposes is being made on some of the lands involved.

Farmers were given assistance in the design and operation of sprinkler irrigation systems. Assistance was given the Dominion Economics Survey in obtaining technical information for their sprinkler irrigation study. The Extension Service including the District Agriculturists were called on to give information and advice on the installation and operation of sprinkler irrigation systems and other special irrigation problems. It is interesting to note that information and advice on irrigation matters was requested from all sections of the Province particularly with regard to sprinkler irrigation possibilities.

Following is a summary of the field work accomplished by Mr. McAndrew and staff:

## SURVEY WORK

Parcels of Land surveyed for field ditches and land leveling estimates .....	36
Miles of field ditches surveyed .....	86
Ditches on 27 parcels of government owned land were marked with a plow	
Parcels of land surveyed for a contour map and land leveling estimates .....	2
Far mvisits regarding the above survey work .....	39
Irrigable acreages surveyed (approx) .....	3,025
A detailed survey and contour map was made of the Provincial Horticultural Station at Brooks—acreage surveyed .....	170

## SPRINKLER IRRIGATION

Farms visited .....	104
Farms on which soil samples were taken .....	49
Soil samples taken .....	1,176
Sprinkler Irrigation Field Days assisted at .....	3
Other farm visits re Sprinkler Irrigation .....	13
Sprinkler Irrigation Demonstrations .....	6

## MISCELLANEOUS

Other activities and programs not listed under the specific headings reported above, include demonstrations of the design and construction of filters for dams and dugouts, forwarding water samples for purity analysis, water safety demonstrations, assistance in obtaining homestead leases, acting on Veterans' Land Act Advisory Boards where provincial lands were involved, assistance with the design of dairy barns and poultry houses, encouragement in the production of certified seed potatoes, warble fly control programs for cattle, power spraying for sheep kid (tic) control, use of corn silage and trench silos for livestock finishing, seed grain drill surveys, film library, assistance with Special Areas Board projects such as community pastures, regrassing, harvesting and cleaning grass seed.

## SUMMARY OF DISTRICT AGRICULTURIST ACTIVITIES

	1946	1947	1948	1949	1950
Number of Meetings .....	1,392	1,608	2,036	2,330	2,613
Attendance at Meetings .....	31,830	80,536	101,248	130,342	152,157
Farm Visits .....	17,999	18,616	19,835	21,337	21,755
Office Interviews .....	38,819	38,500	44,453	42,861	44,818
Telephone Calls .....	28,738	31,124	36,461	34,592	38,892
Letters Written .....	33,320	32,351	39,067	34,746	39,894
Bulletins Distributed .....	110,619	82,924	109,496	94,724	123,104

## HOME ECONOMICS SERVICE

### DISTRICT HOME ECONOMISTS

"A good life as well as a good living" is a basic objective of this Service when working with Alberta's rural women and girls. The program of work is flexible so as to be sensitive and ever responsive to the changing needs and adjustments of the farm family.

More staff changes have taken place than for several years past. Six District Home Economists resigned, namely: the Misses LaPrile Low, Lethbridge; Edith Armstrong — Westlock; Cecilia Connelly — Grand Prairie; Sheila Forrest—Ryley; Ruth Murray—Wetaskiwin; and Mrs. Joyce Reierson—St. Paul.

Norma Gray was transferred from Calgary to Brooks and Priscilla Mewha from Stettler to Calgary. One headquarters was moved from Ryley to Wainwright. Also, Margaret Smith and Lillian Wasiuta took leave-of-absence for two and ten months respectively to take post-graduate courses.

To fill these vacancies, the following appointments were made: Bertha Andreassen to Westlock; Bernice Reed to Wainwright; Alberta Moreau to Wetaskiwin; Helen Robinson to Stettler; Mary Smart to Lethbridge; Patricia Seldon to Grande Prairie; and Elizabeth Bartman to St. Paul.

Before trained and suitable personnel could be found to fill the vacancies a total of 14 months was lost.

Despite these changes in staff and resulting time loss, records show that while there has been a slight decrease in the number of demonstrations and home visits, there is a notable increase in the number of office interviews and phone calls. This would indicate that homemakers are becoming better acquainted with the scope of the services of this Branch and are asking for more individual assistance with their problems.

An effort to make demonstrations more effective has proved successful through planning new approaches and teaching techniques which encourage the group or members of the group to participate in the demonstration. For example, a demonstration on Better Buymanship may require members to indicate the best buy from a display of articles such as household textiles, pots and pans or clothing, etc. This is a variation of the popular sewing "clinic" method proving the principle of learning by doing. Plans are being developed to apply this principle to other homemaking demonstrations. Results have already shown the homemaker to take a keener interest and that there are more lesson "takes," i.e. more is remembered and tried or applied at home.

Ten of the thirteen District Home Economists who now have cars have demonstrated the possibility of improving the quantity, quality and scope of the work when cars are made available. However, the areas of the districts served by the Home Economics are still too large, each having three or four District Agriculturists areas. The Home Economists continue to report that they cannot meet the many demands for their services. Wider use is being made of their services by other branches of this Department, other Governmental Departments, and by Provincial and Community organizations—all expecting assistance with their specific projects or programs. It was necessary last summer to employ extra part

time assistance but this is not satisfactory due to lack of familiarity with programs, methods, the district, etc.

### CLOTHING AND HOME SEWING

With prices of clothing, particularly children's garments, mounting even higher this year, sewing clinics maintain the enthusiastic approval of rural homemakers. This is one phase of extension work where tangible savings to the family budget can be shown as a result.

District Home Economists organized and supervised 118 sewing clinics attended by 3,032 women. The clinics varied from 2 to 5 days with a total of 468 sessions. Records kept by two Home Economists at 12 sewing clinics indicate 146 new garments were made at a saving of \$728.12, or 48.7 per cent as estimated by the homemakers. The greatest saving is made in better quality garments, so that the more expert homemakers become in sewing—the greater the savings realized. "Made-over" garments, usually for children, would show a much higher percentage saving. In addition 9 other clinics on sewing for the home, e.g. slip covers, drapery, etc., were held and at 37 meetings, dress forms were made.

Lectures and demonstrations given on other topics related to clothing were: "How to Dress"—93; "Use and Care of the Sewing Machine"—48; "Choice and Care of Fabrics"—49; as well as 109 lectures and demonstrations given to Girls' Clubs on clothing and sewing. Thirty-six newspaper articles were prepared on problems related to clothing. Through home visits and interviews 536 individuals were assisted with sewing problems.

### FOODS AND NUTRITION

On foods and nutrition District Home Economists gave 201 lectures or demonstrations. The topics may be grouped as follows:

Number	Topic	Attendance
105	Food Preparation and Service .....	3,301
48	Food Preservation .....	3,406
33	Nutrition .....	1,848
15	School Lunch .....	663

Demonstration topics have included many subsidiary phases of food preparation. In the field of food preservation the demand for demonstrations on the freezing of food still tops the list. The attendance at the latter demonstrations has been slightly lower due to the fact that there have been fewer locker plant openings. An increased number of small groups have requested demonstrations. There is also a demand for canning demonstrations.

"Food Clinics" have been held by two of the District Home Economists. The plan of these clinics, at which the women participate in food preparation, is described in the following food and nutrition section. Where these clinics have been held they have proven very successful. One of the Home Economists states "Ladies report that they prefer demonstrations of this type since they are much more apt to prepare foods from recipes they have tried themselves".

Nutrition facts are continually being emphasized during addresses and demonstrations on food preparation, preservation, meal planning, and buymanship, as well as on the relation of food to health. One Home Economist has held several "buymanship quizzes". Available foods of different classes, two or more samples of each, are presented. Group members are asked to state which they would choose and why. The Home

Economist then comments on her selection bringing out significant points in food selection and buymanship. Merchants report their customers more "grade conscious" after each program. The Home Economist also reports receiving more individual requests for assistance following these meetings.

Nine radio talks by District Home Economists in 1950 dealt with food or nutrition topics and 132 newspaper articles were written for local papers. As in other years a very appreciable amount of assistance has been given through personal contacts during home visits, office calls, contacts following meetings and on the street, as well as through correspondence and telephone calls.

### GIRLS' CLUB WORK

The supervision of the Girls' Clubs is carried on by the Home Economists in their own districts under the Provincial Program. These clubs not only provide an opportunity for the Home Economists to teach homemaking to the girls, but they are also the occasion for home visits and contacts with parents.

In 1950 the District Home Economists had 139 Girls' Clubs with a membership of 1,747 under their direction. They gave 364 talks or demonstrations on foods, clothing, home decoration, and club work. All clubs held Achievement Days which were attended and judged by the Home Economists. Six thousand, six hundred and forty people attended these Achievement Days, supporting the statement that adult contacts result from the work. Forty-seven Field Days, Rallies, and Tours were organized and conducted. The District Home Economists were responsible for the educational program of these.

The Farm Girls' Camps conducted at 5 fairs were under the supervision of the District Home Economists and instruction was provided by them and other staff members. A number of Home Economists assisted with the supervision and instruction at Leaders' Courses and Short Courses held at the School of Agriculture during the summer months. On the average, 30 per cent of the Home Economist's time was spent on club work.

This year 81 girls' club members have been assisted in homemaking and educational problems. In general, the standard of work in the clubs has improved greatly over the past year. Much of this is due to the fact that cars have enabled the Home Economists to make better contact with their clubs and they have developed more demonstrations and illustrative material with which to work.

### HOUSING

The work done by the Home Economists in the field of Rural Housing has been satisfactorily expanded this year. A total of 79 lectures (attendance 1,657) were given on the general topics of home planning, remodeling, interior decoration and home equipment, while 809 homeowners received individual attention on particular planning problems.

Under the guidance of the Home Economists, 87 Interior Decoration Home Study Groups were started. This figure represents 1,937 rural women who are studying the art of creating comfortable, attractive homes.

The Home Economists periodically checked on the building progress of the new farm homes (approximately 180) that are being built according to blue-prints from the book of "10 Farm House Plans".

The demand for help in planning home improvement was increased this year. The remodeling and modernizing of 37 homes, 53 kitchens and 5 living areas helped to raise the standard of living in 58 rural homes. The advantage of a Utility Room was stressed in the improvement scheme and many homes have been remodeled to provide for this work area.

A great deal of work remains to be done in this field of Rural Housing in order to make many farm homes comfortable for daily living.

### HOME MANAGEMENT

This is a phase of the work which has unlimited possibilities for providing service, but mainly due to lack of time has not been fully developed. A total of 3,178 women attended 13 lectures on "Planning Expenditures," 19 demonstrations and lectures on "Time and Energy Savers," 78 on "Buymanship and Care of Textiles, Foods, Equipment or Home Furnishings," and 20 on "Home Safety". Individual assistance was given to 293 homemakers and sixty-four newspaper articles were prepared dealing with these topics.

### FAMILY RELATIONSHIP

With a larger proportion of families now in the early stages of the family cycle as a result of the increase in marriages there is a need and demand for guidance in child growth and development. Also, the tempo and tensions of modern living have brought new problems into family life so that more attention must be focused upon psychological factors affecting a happy relationship in family living, upon life goals, which matter most and ways of achieving them. Thirty-one lectures were given with an attendance of 1,796 and 42 individuals assisted. The more experienced Home Economists are being encouraged to study further the problem and possibilities of assistance in this field.

### HANDICRAFTS

A total of 169 demonstrations attended by 4,150 women were given on the following: Leathercraft, glovemaking, rugmaking, bazaar and Christmas gift ideas, textile painting, feltcraft and metal work. District Home Economists must limit the time spent in this popular work, using it mainly in new areas as a means of becoming acquainted and ultimately assisting with more fundamental problems. Individual assistance was given to 335 persons, 7 of whom earn their living from handicrafts. Many have made their homes more attractive and comfortable by using ideas presented at these demonstrations. For others, handicrafts provide a satisfying activity for evenings on the farm and for ultimate old age.

### OTHER DEMONSTRATIONS AND LECTURES

There were 87 meetings attended by 2,085 women and girls and 269 individuals assisted on topics related to etiquette, entertaining, table-setting special occasions, and flower arrangement.

There were 49 general talks outlining the service of the branch, 224 dealing with Women's Work, 157 with Girls' Club Work and 28 about the Schools of Agriculture—the total attendance being 12,027.

### SHORT COURSES, FIELD DAYS AND MEETINGS IN CO-OPERATION WITH OTHER ORGANIZATIONS

District Home Economists lectured and demonstrated at 129 short courses and field days. Sixty-three of these were in co-operation with the

District Agriculturist, 23 with the Dominion Department of Agriculture, 5 with the University Extension Service, and 27 with the Agricultural Service Boards. In addition 33 meetings were at the request of other organizations such as the Veterans' Land Act, Rural Health Units and National Film Board. The District Home Economists are called upon for assistance in arranging programs and entertainment at Conventions of Provincial and National organizations, e.g. for wives attending the Weekly Newspaper Publishers' Convention, Provincial and National Beekeepers' Convention, Municipal District Convention, etc. Advice and assistance are also sought by local organizations such as School Boards, Fair Boards, Relief Services and other Social Services.

### JUDGING AT FAIRS, CONVENTIONS AND WOMEN'S INSTITUTE CONFERENCES

District Home Economists judged at a total of 98 fairs, conventions and conferences. In addition arrangements were made for judges for many of the fairs at which the Home Economists were too busy to judge or unable to attend. There has been considerable interest in "Standards for Judging" among women's organizations this year. Plans are being made to revise the "Suggested Prize List" for use of Fair Boards to improve the educational value of fairs. Home Economists assisted in the organization of 18 Fairs and prepared 16 Exhibits at Fairs or Conventions.

### RADIO, NEWSPAPER ARTICLES AND NEWSLETTERS

A total of 57 radio addresses on timely topics of interest to rural homemakers and girls were given by the Home Economists. Radio notes have been prepared for the Farm and Home broadcasts.

Three hundred and twenty-seven newspaper articles were prepared for use by several different papers in the respective districts of the Home Economists. Ten of the Home Economists prepare regular weekly columns for local papers. To keep in closer touch with women's groups, District Home Economists prepared seventy-four newsletters containing timely information, and announcements of new programs, services and publications. A copy is sent to each group or to key people and reports indicate that they are enthusiastically received and read at their meetings.

### D.P. DOMESTIC WORKERS FOR FARM HOMES

District Home Economists continue to investigate applications, place, visit and transfer the D.P.'s under their care.

### OTHER ACTIVITIES

The Home Economists assisted in judging 52 farm families nominated to the Master Farm Family Award and also assisted in the Regional Judging.

Assistance was given the Edmonton District Agricultural Society in judging the 36 entries in their Farm and Home Improvement Contest.

## SUMMARY OF ACTIVITIES, ETC.

1950	
No. of Demonstrations .....	1,814
Attendance .....	63,787
Average Attendance .....	151
Field Days and Short Courses .....	129
Judging at Fairs, Conventions .....	98
Radio Addresses .....	57
Publications Distributed .....	73,775
Letters Requesting Information .....	12,755
Home Visits .....	2,034
Girls' Clubs .....	139
Office Interviews .....	3,598
Phone Calls for Information .....	6,158

## HOME DESIGNING

## HOME STUDY COURSE

The Interior Decorating Home Study Course increased in popularity during 1950. Many rural and urban groups obtained the study material to form part of their winter activities. Eighty-seven groups have undertaken the project; this figure represents 1,937 homemakers from widespread parts of the province.

The project book and the six study booklets were revised and reprinted to meet the steady demand for material on this subject.

## PRAIRIE RURAL HOUSING COMMITTEE

This year, a great deal of time was allotted to the compiling and composing of material for a Farm Kitchen and Utility Room booklet.

The work on this booklet is being done jointly with the Rural Research Centre of the University of Manitoba, which has provided suitable illustrations for a book layout.

Although further work remains to be done on the project it will be published in 1951 under the sponsorship of the Committee and will be distributed to the Prairie Provinces.

## REMODELING

During the summer an unusual remodeling project was carried out on a farm in the Morinville district.

A derelict farm, selected by the Agricultural Service Board, was transformed into a place where any farm family would be proud to live.

Considerable time and effort was devoted to preparation of a plan for the remodeling and refurnishing made possible by contributions of building materials, furniture, bathroom and kitchen fixtures, and a complete water system by commercial firms. A field day was held to display the work.

The Remodeling Kit, which was assembled last year, assisted other rural people to remodel and modernize their farm homes. This year 18 homes, 32 kitchen and 17 utility room plans were sent out to private homeowners.

## HOME PLANNING

Several short courses on Farm Home Planning were held during the year among groups, mainly of young-adult age.

The topics covered in these short courses were:

1. How to analyse family housing requirements.
2. Planning Standards and Sizes.
3. How to draw a scale plan.

## OTHER ACTIVITIES

Four radio addresses on housing were given for the Department of Agriculture and the CBC.

Twelve monthly newsletters concerning home planning, building materials, furnishings and equipment were sent to field staff and a large rural mailing list. Several of the Prairie Rural Housing Committee booklets were reviewed and criticised.

## FUTURE PROJECTS

The Farm Kitchen and Utility room booklet remains to be completed during the early part of 1951.

A Home Planning Study Course, similar to the Interior Decoration Study Course will be instituted so that individuals or groups may learn the details of home planning.

## FOODS AND NUTRITION

The chief change in the Food and Nutrition Program this year has been the introduction of "food clinics". The result of these clinics show that the principle of learning by doing can be applied to food work as well as to other phases of homemaking. Six clinics were held, four of these conducted by the Nutrition Specialist together with Home Economists from two districts. The two Home Economists are following up with more of these programs. Any phase of food preparation can be the topic for a "clinic," and opportunity arises for instruction in nutrition as well as in techniques of food handling.

A total of 60 lectures and demonstrations on Food and Nutrition topics were given by the Nutrition Specialist; with an attendance of 1,868. Eleven of these were at Adult Short Course Programs, two at Short Courses for Young People, seven to Nutrition Study Groups, four at food clinics, fifteen to school groups, two to Girls' Clubs, one to Club Leaders, and the remainder to other adult groups.

Correspondence has included 111 replies to requests for information on food and nutrition topics. The greatest number of requests are received in the fall of the year and are on methods of food preservation. Other requests include those for advice about pressure cooking, meat cookery, and suggestions for the preparation of vegetables, eggs, and cheese. Frequent requests are received for assistance in meal planning, and occasional letters ask for dietary advice, particularly for the overweight.

Four radio talks were given over CKUA and twenty-four items prepared for the Agricultural Notes. Twenty-one of the latter were of a series based on the experiences of a fictitious homemaker "Mrs. Wise". These were started as a series on meal planning and buymanship and proved so popular that they were continued, dealing with all phases of nutrition and food preparation. Notes for the "Mrs. Wise" series are now prepared twice monthly.

Work on publications this year has included the completion of the Girls' Club Project "The Main Dish" and revision of the leaflet "Food After Fifty". Work has been commenced on a leaflet called "Three Way Meal Planning".

A guide for organization of The School Lunch program is to be published jointly by the Departments of Education and Agriculture. It is being planned by a committee consisting of the Nutrition Specialist of the Department of Agriculture who convenes the committee, two School Superintendents, the Supervisor of Home Economics of the Department of Education, a Home Economics teacher, a grade school teacher and a representative of the Department of Health. The actual writing of the bulletin is to be done by the Nutrition Specialist. It will provide information and suggestions on how to start a school lunch program, how programs are financed, space and equipment requirements, floor plans, organization and supervision, menus and recipes, and how to correlate the lunch program with other school activities. Up to the present time no material of this kind has been published in Canada.

The Nutrition Specialist received leave to attend the joint annual meeting of the Canadian Home Economics and Canadian Dietetic Associations and the pre-conference course in Nutrition which was held in Montreal in July. The five-day pre-conference course consisted of lectures and discussions on many topics, including Food Grading, The World Food Situation, Canadian Nutritional Problems, Nutrition Education, Methods of Studying Food Habits, and the School Lunch Program.

## REPORT OF VETERINARY SERVICES BRANCH

E. E. Ballantyne, V.S., D.V.M.	- - - - -	Director.
J. G. O'Donoghue, V.S., D.V.M.	- - - - -	Extension Veterinarian.
G. S. Wilton, V.S., D.V.M.	- - - - -	Veterinary Pathologist.
C. H. Bigland, V.S., D.V.M., D.V.P.H.	- - - - -	Veterinary Pathologist.
G. K. Weir, V.S., D.V.M.	- - - - -	Micropathologist.

### GENERAL

The work of the Branch has kept increasing as livestockmen and poultrymen are realizing that it pays to prevent and control disease losses.

All important livestock and poultry raising countries must have veterinary services to maintain production on a profitable basis and also to provide adequate quality products for the consuming public.

Alberta, with its large livestock and poultry industries, has to depend on export for a large part of its markets, therefore disease-free stock is a necessity to maintain the domestic and export markets as well as for public health reasons. Alberta is gradually getting into a top position in Canada with veterinary services to its agriculture industry through the increased number of practising veterinarians, the extension and laboratory services of this Branch, the increase in staff of the Dominion Health of Animals Division and also the research facilities at the Veterinary Research Laboratory, Lethbridge.

To further round out the diagnostic service of the Alberta Veterinary Laboratory, Dr. G. K. Weir was appointed in July as micropathologist. Examination of stained tissue sections is an important aspect in disease diagnosis and in many cases a diagnosis can only be made by this method.

From verbal reports, Actinomycosis (lump-jaw) of cattle appears to be becoming more common in Alberta. For example, 1,408 cattle slaughtered under inspection at an Edmonton abattoir showed lesions of this disease. It causes a considerable loss of meat. Isolation of the sick animals and treatment by a veterinarian is recommended.

### T.B. RESTRICTED AREAS

The tempo of preparation by the province for T.B. Restricted Areas and the testing by the Dominion Health of Animals Division greatly increased during 1950. Alberta, at the beginning of the year, only had about 20% of its cattle tested, compared to 60-100% tested in other provinces. For public health reasons and also to maintain the domestic and export markets, it is imperative that all of Alberta cattle be tested for Tuberculosis as soon as possible. The progress made during the year is shown in the following table:

JANUARY 1, 1950

T.B. Restricted Areas	
-----------------------	--

M.D.'s .....	8
--------------	---

I.D. ....	1
-----------	---

Sp. As. ....	2
--------------	---

--	--

JANUARY 1, 1951

T.B. Restricted Areas	
-----------------------	--

M.D.'s .....	15	Increase
--------------	----	----------

I.D. ....	1	7
-----------	---	---

Sp. As. ....	2	0
--------------	---	---

1. Note: 2 M.D.'s of January 1, 1950 were re-tested in 1950 as the 6-year limit expired.

Petitioned—Ready for Testing

M.D.'s .....	6
--------------	---

I.D. ....	1
-----------	---

Sp. As. ....	2
--------------	---

--	--

2. Note: 2 M.D.'s listed for January 1, 1950, progressed to T.B. Restricted Areas.

Petitioning

M.D.'s .....	9
--------------	---

I.D.'s .....	3
--------------	---

Sp. As. ....	2
--------------	---

--	--

3. Note: 3 M.D.'s listed for January 1, 1950, progressed to T.B. Restricted Areas.

4. Note: 2 M.D.'s not even petitioning on January 1, 1950, have progressed to T.B. Restricted Areas.

T.B. TO BE PETITIONED

M.D.'s .....	32
--------------	----

I.D.'s .....	35
--------------	----

Sp. A. ....	1
-------------	---

--	--

Note: Only about a total of 5,000-10,000 cattle in the 6 marginal Improvement Districts remain to be petitioned.

\* M.D.—Municipal District.

I.D.—Improvement District.

Sp. A.—Special Area.

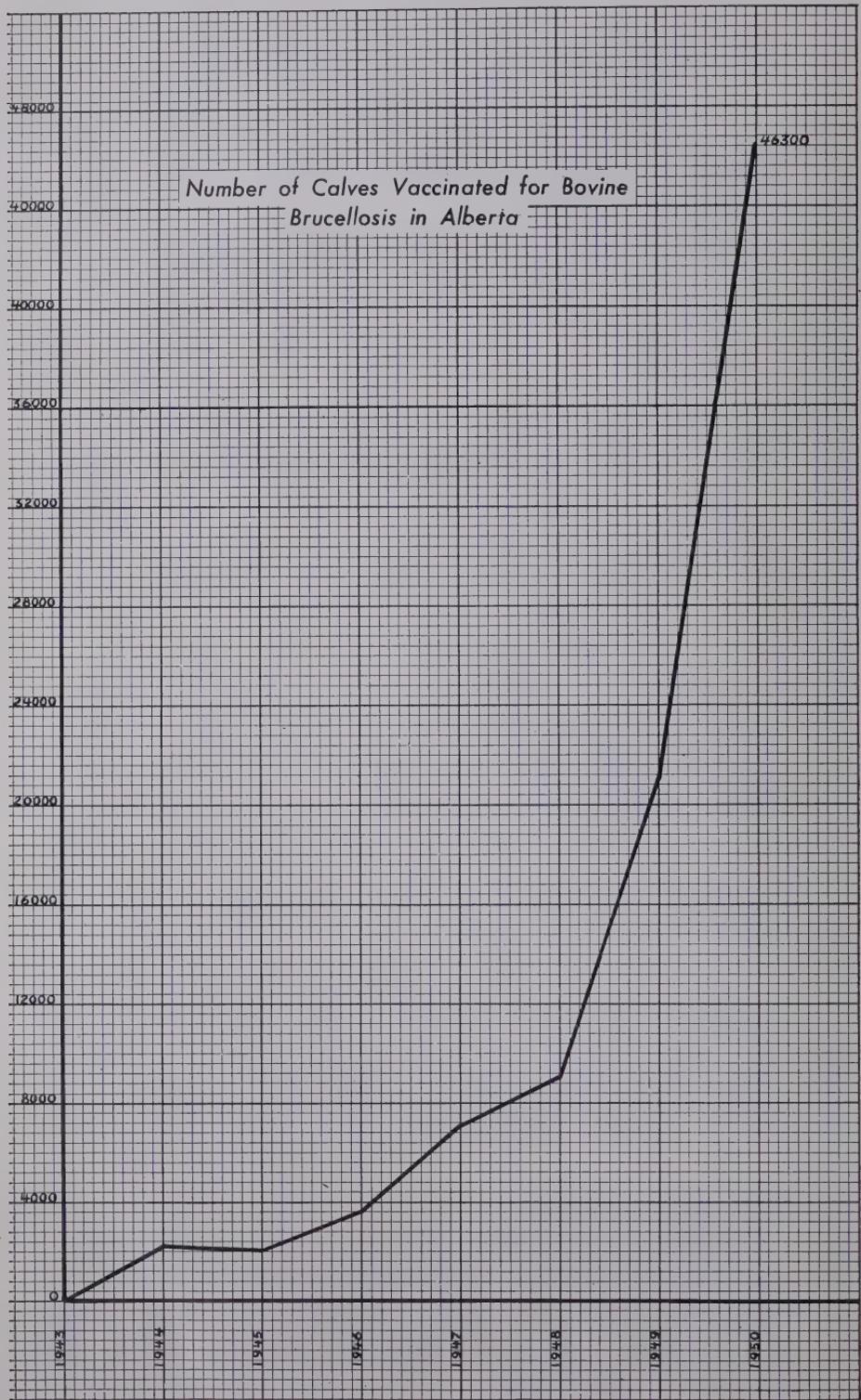
From April to November, the Director spoke at 35 meetings in Southern Alberta on Tuberculosis to cattlemen to get the petitioning started. Two other meetings were held in Northern Alberta. The meetings were arranged by the District Agriculturists in co-operation with Councils or farm organizations. The District Agriculturist at Medicine Hat had seven additional meetings himself to get his district organized. Dr. H. C. Storey, District Veterinarian of the Health of Animals Division, and members of his staff assisted at many of these meetings to explain the regulations. On December 31, 1950, only one municipality and 6 Improvement Districts remained in the province to commence petitioning.

To help bring the number of Alberta T.B. Restricted Areas up to the other provinces, the Dominion Health of Animals Division sent extra inspectors out from Eastern Canada to speed up the work. At the end of 1950, there were 15 T.B. Restricted Areas in the province compared to nine at the beginning of the year. Approximately 150,000 cattle were tested in 1950 compared to a total of 250,000 for the past 10 years. Their staff is being increased in Alberta all the time to further accelerate the rate of testing.

## BRUCELLOSIS CONTROL

### (A) Calfhood Vaccination Program

The number of calves vaccinated greatly increased again, as shown by the following graph:



During the year, two municipalities, Starland M.D. No. 47 and Wainwright M.D. No. 61, circulated petitions for Brucellosis Restricted Area with a 95% and 90% sign-up, respectively. The compulsory calfhood vaccination program was adopted. Besides vaccinating every heifer calf, there will be control of auction sales and community pastures, the branding of reactors found on private test, and milk of infected herds must be pasteurized before being sold for human consumption. Several other municipalities are considering the same legislation.

The following municipalities were quite active with voluntary calfhood vaccination campaigns: Vermilion River, Minburn, Eagle, Lamont, Morinville, Westlock, Stony Plain, Strathcona, Leduc, Camrose, Beaver, Wetaskiwin, Ponoka, Lacombe, Red Deer, Stettler, Sedgewick, Special Areas 2 and 3, Cardston, Vulcan, Argyle and Pincher Creek. In Southern Alberta, most ranchers contact their veterinarians direct or leave their names with the District Agriculturist.

Starting July 1, 1950, the Federal-Provincial Brucellosis Control Program came into force. Under this program the Dominion Health of Animals Division supplies the vaccine, free of charge, to a co-operating province. The province supplies the eartags, certificate books, does all the promotion work, keeps records, etc. Two copies of each certificate are forwarded to the District Veterinarian in Calgary for their records to certify vaccines for export. One of the important results of the program was the arrangement which came into force on December 10th with the United States, whereby official vaccines will be accepted for export up to 22 months after vaccination without blood test for Brucellosis. An official vaccine is a calf vaccinated at 6, 7 or 8 months of age. This arrangement for export has encouraged many purebred breeders to start having their calves vaccinated.

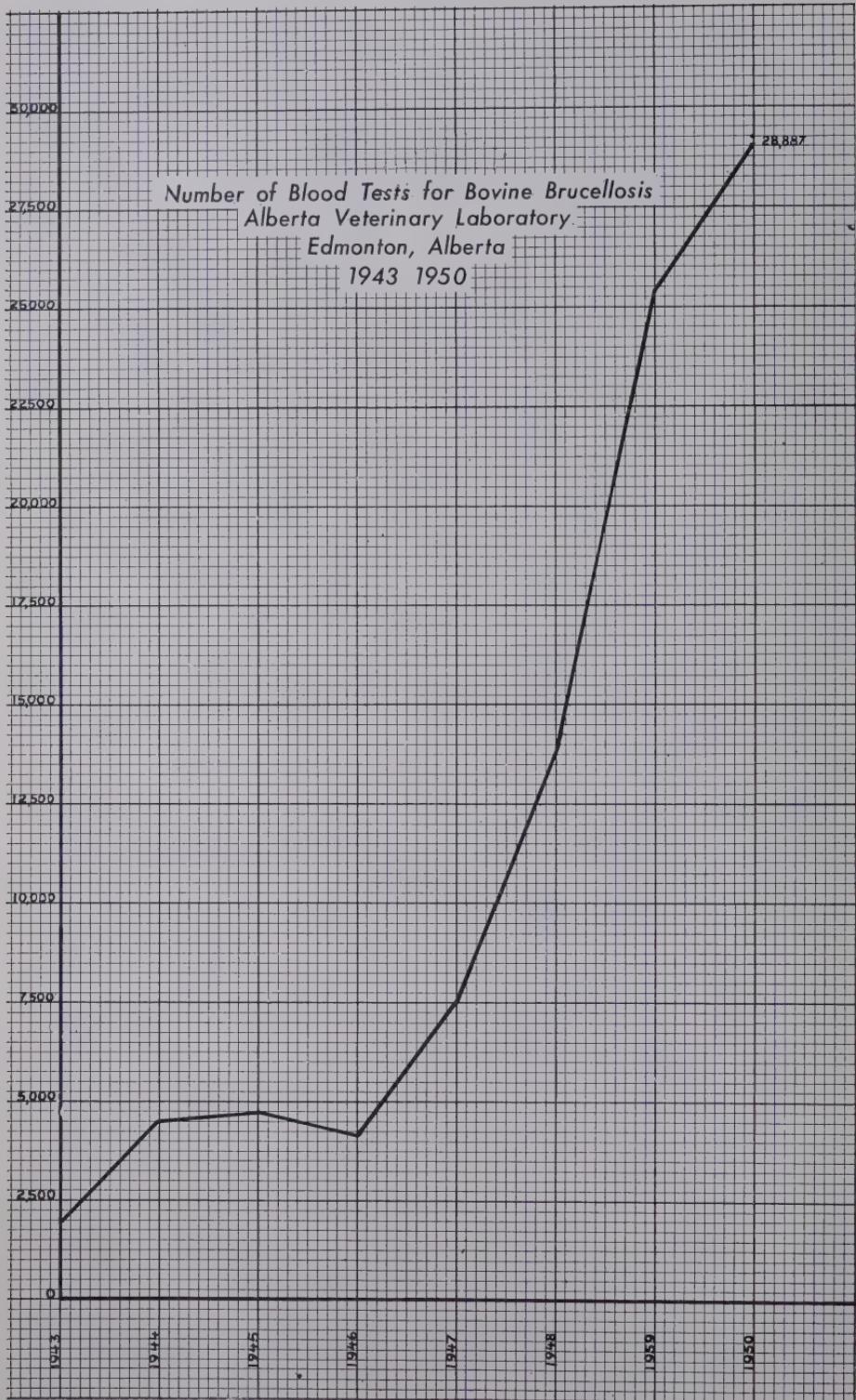
#### **(B) Educational**

There was a total of 62 meetings addressed on Calfhood Vaccination during the year, as well as giving radio talks, writing articles for Livestock Journals, and issuing press releases. A large number of enquiries were answered and bulletins distributed. A set of coloured slides was built up to assist at the meetings.

#### **(C) Diagnostic Service**

The number of agglutination tests for the diagnosis of bovine Brucellosis (Bang's disease) has greatly increased during the past few years according to the following graph:

Number of Blood Tests for Bovine Brucellosis  
Alberta Veterinary Laboratory  
Edmonton, Alberta  
1943 1950



This reflects the interest of the cattlemen in helping to prevent and in controlling this serious disease which not only affects cattle, but can also cause undulant fever in man. These tests are practically all for diagnosis as most of the several thousand export tests are made at the Veterinary Research Laboratory, Lethbridge. It is interesting to note that a test on the herd has frequently aided the medical authorities in diagnosing cases of undulant fever. One veterinarian in Alberta contracted the disease in 1950. Veterinarians, due to the nature of their work, run a high risk of developing undulant fever.

### ERADICATION OF T.B. IN HOGS AND POULTRY

Thirty-eight percent of the hogs going through the Edmonton Packing Houses showed lesions of Tuberculosis during 1948. Hogs are very susceptible to avian tuberculosis which is quite widespread in Alberta. To a limited extent the disease can be spread from hog to hog in a badly infected piggery.

As the disease can be controlled by following good husbandry practice, an extensive educational campaign was initiated in the latter part of 1949 and continued through 1950. This consists of sending a letter on Tuberculosis in swine, accompanied by a bulletin on avian Tuberculosis, to all owners where hogs show evidence of the disease when slaughtered in an abattoir under veterinary inspection. Since the start of this campaign, approximately 2,000 letters have been mailed to these owners. In many cases, owners have expressed appreciation for being advised of the presence of the disease and have called in their local veterinarian to discuss preventive measures.

During 1950, 963 shipments of hogs to the Edmonton Packing Houses from 936 premises showed extensive lesions of Tuberculosis. 1,070 hogs out of 5,976 had extensive lesions, of which 159 were condemned and 58 rejected. An analysis of the origin of these shipments shows the following municipalities with more than 35 affected shipments:

Smoky Lake, Leduc, Camrose, St. Paul, Wetaskiwin, Lamont, Ponoka, Eagle, Sturgeon, Minburn and Westlock.

### VETERINARY STUDENTS

Twenty-two students from Alberta are attending the Ontario Veterinary College. The number in each year is as follows:

First year	-----	3
Second	-----	4
Third	-----	5
Fourth	-----	10

Twelve Albertans graduated from the above-named College during 1950 and started practices in Vermilion, Edmonton, Camrose, Tofield and Lacombe. Three others joined the staff of the Health of Animals Division in Alberta and one is taking post-graduate studies at the University of Toronto.

Through the efforts of the Veterinary Medical Association of Alberta, veterinarians are being placed in centres so that livestockmen are assured of professional care of their stock. Their reliance on the veterinarian is increasing all the time as they realize the value of accurate diagnosis and correct treatment as well as preventive measures.

## SALE OF VETERINARY BIOLOGICS

Chapter 50 of the 1950 Alberta Statutes, an Act to amend the Alberta Pharmaceutical Association Act, 1945, under section 4, clause 27B states, "No person other than a pharmaceutical chemist, a duly registered veterinary surgeon, or a person duly authorized so to do pursuant to any act or regulation of the Province shall advertise, sell or attempt to sell or keep or expose for sale or distribute in any manner whatsoever any veterinary biological product for use by hypodermic injection into any animal".

To bring this clause into effect for "a person duly authorized," regulations were passed under The Live Stock Diseases Act enabling the issuing of permits to those complying with the regulations. The main regulation is one requiring refrigeration facilities to keep such biologics as they will soon deteriorate without refrigeration and therefore become of no value to the livestockmen. Fifteen permits have been issued to date. Some applications were not accepted, as refrigeration facilities were not provided.

## HATCHERYMEN'S SHORT COURSE

Hatcheries are places where eggs come in from many sources and chicks go out all over the province. If infectious diseases were introduced into a hatchery, several premises might become infected in a very short time with disastrous results. Correct fumigation and sanitary measures properly carried out will reduce to a minimum the danger of the spread of various infectious diseases.

To keep the hatcherymen informed of the latest methods of fumigation and sanitation as well as the reason for these, a short course was held at the Veterinary Laboratory in November. This was the first of its kind in Canada. Speakers on poultry diseases and prevention and control of the same were given by Drs. E. E. Ballantyne, C. H. Bigland, R. B. Catt, W. Moynihan and also Messrs. P. J. Higginson and L. F. Dawes. Films were shown to further clarify the points brought out in the talks. The short course was opened by Mr. O. S. Longman, Deputy Minister of Agriculture, with practically every hatcheryman in the Province attending. The hatcherymen were very appreciative of the short course, as it was very educational.

## REPORT OF THE VETERINARY LABORATORY

The day of guessing is past and a definite diagnosis has to be made to get maximum efficiency from treatment with the drugs and antibiotics produced in the past decade. In many cases, this information can only be obtained through a laboratory examination employing post mortem bacteriological, micropathological and serological techniques. The laboratory work also gives fundamental information which is of importance as the basis for proper prevention and disease control measures.

The laboratory was visited by the United Kingdom Delegation and also by the Alberta Livestock Co-operative convention delegates. For the latter, a display of diseased specimens was shown with explanations by members of the staff relating to condemnation at the Packing Houses.

The delegates at the Alberta Veterinary Medical Association's annual convention spent half a day at the laboratory where demonstrations and lectures were given on important subjects.

The number of specimens examined at the laboratory has shown another great increase, as is evident by the following graphs:

TOTAL SPECIMANS  
EXAMINED

AT

ALTA. VETERINARY LABORATORY

1940 1950

7200

6800

6400

6000

5600

5200

4800

4400

4000

3600

3200

2800

2400

2000

1600

1200

800

400

0

1940

1941

1942

1943

1944

1945

1946

1947

1948

1949

1950

ENTERED NEW LABORATORY



**(A) Extension Services**

Duties of Dr. J. G. O'Donoghue, Extension Veterinarian, consist of:

1. Investigation and service trips to reported disease outbreaks at the request of Veterinary Practitioners and to districts not adequately serviced by Veterinarians.
2. Lectures on Veterinary Science to students in Agriculture and Pharmacy at the University of Alberta.
3. Lectures on Animal Sanitation and Disease Control to students at Olds and Vermilion Schools of Agriculture.
4. Administration of the Mink Distemper Vaccine Program.
5. Supervision of all Brucellosis vaccine distributed under the Federal-Provincial Calfhood Vaccination Program.
6. Supervision and maintenance of accurate records for the government-sponsored and combined Mastitis and Brucellosis Control programs.
7. Routine laboratory work.

**(a) Investigation and Service Trips**

Cattle -----	88
Fur -----	21
Horses -----	33
Swine -----	16
Poultry -----	4
	162

**MEETINGS**

The following meetings were addressed by Dr. J. G. O'Donoghue in 1950: Short Courses at Mayerthorpe, Rochfort Bridge, Sangudo, Onoway, Rimbev, Strathcona Service Board, Faust Fur Breeders, Slave Lake Fur Breeders, Canyon Creek Fur Breeders, Joussard Fur Breeders, Lac La Biche Fur Breeders; Dairy Field Days at Rocky Mountain House, Bentley, Thorsby; Frozen Food Locker Short Course; Field Days—Longview and Red Deer Lake.

**RADIO TALKS**

Three radio talks on disease prevention were given. Other members of the Branch gave eight more.

**CATTLE**

(1) Listerellosis of cattle was confirmed. This disease manifests itself by symptoms of central nervous system origin. It had been suspected for several years. Isolation and identification of the causative organism is difficult. All were isolated occurrences.

(2) The herds of the University of Alberta Olds School of Agriculture and Fairview School of Agriculture were blood tested and all calves vaccinated for Brucellosis. The herd of Vermilion School of Agriculture was tested for Brucellosis and Tuberculosis.

The herds at Ponoka and Oliver Mental Institutes are under the supervision of this Branch.

Totals: Blood Tests -----	713
Tuberculin Tests -----	341
Vaccinations -----	76

**(3) Mastitis Control Program**

There are several Government-sponsored Mastitis Control Programs available to Alberta milk producers. All milk samples are examined by the Provincial Dairy Laboratory. The Veterinary Laboratory is responsible for the maintenance of complete and accurate records in order that results may be properly assessed and the program adequately supervised.

**(a) Provincial Mastitis Program**

This is a private agreement between the herd owner and his veterinarian. All milk samples are examined free of charge by the Provincial Dairy Laboratory. There were 30 herds under this program in 1950.

**(b) Edmonton Brucellosis and Mastitis Control Program**

This program was available to milk shippers in the Edmonton Milk Shed and was designed as a co-operative effort among milk shippers, distributors, veterinarians and the Department of Agriculture. The veterinarian agreed to work at a nominal first fee plus cost of drugs. The distributor agreed to lift milk samples three times in the year. Unfortunately, difficulty was experienced in having samples lifted in 1950. Some of the distributors felt that there were not enough herds under the program to warrant the additional expenditure involved in lifting milk samples. The program is under revision at the present time and it is hoped that more suitable arrangements can be made. The program has shown that Mastitis can be greatly reduced and controlled, provided the dairyman is willing to follow a strict sanitary milking procedure.

**(b) Linden Brucellosis and Mastitis Control Program**

A program similar to the Edmonton program has been in operation among the milk shippers to the Linden Cheese Factory. There are 25 herds under supervision.

Mastitis Control programs have proven highly effective and are economically sound. Such programs with the full co-operation of herd owners can, and do reduce the losses caused by Mastitis.

**HORSES**

(1) As required by The Stallion Enrolment Act, 17 stallions were inspected and passed.

(2) In the Blue Ridge District, the horses in a comparatively small district are suffering from a condition which renders them useless for heavy work. Affected animals when forced to exert themselves will stumble and go down. After a short rest, they will regain their feet but cannot work. There have been no deaths. A thorough investigation would indicate that it is a result of poor nutrition and lack of conditioning. It was impossible to demonstrate the presence of any disease condition.

**SWINE**

The herds of all swine going to the Royal World Fair were inspected for rhinitis. All were free of the disease.

**FUR ANIMALS**

There were few serious disease outbreaks in the Fur Bearing Animals this year. Distemper occurred in several districts, but with the exception

of Primrose Lake where a number of ranches were affected, the outbreaks were isolated instances.

### (1) Distemper Vaccine Bank

The purpose of the bank is to maintain a readily available supply of vaccine. It is supplied to Fur Ranchers at approximately cost price. A total of 6,550 ccs. or 3,825 doses of distemper vaccine were supplied to 14 fur ranches. On occasions, when commercial vaccine has failed to check an outbreak, autogenous vaccine is produced in the laboratory from affected animals and is supplied free of charge. 1,500 ccs. of autogenous vaccine were distributed during the year.

### (2) Alberta Distemper Vaccine Assistance Plan

In compliance with the many requests from the Fur Breeders of Alberta, this plan was brought into force in September, 1950. Distemper is the greatest single threat to Alberta fur farms, and control measures are warranted for the protection of the industry. To be recognized as a district this plan requires that  $66\frac{2}{3}$  of the fur ranchers in the district petition the Minister of Agriculture. The petitions must be accompanied by an assessment of five cents per head for every animal on each ranch as of the first of July in each year. The ranchers must also agree to maintain accepted standards of sanitation and disease control. The Department then agrees to supply, free of charge, mink distemper vaccine for confirmed distemper outbreaks which occur in the district on the ranch of any subscriber. In addition, vaccine is made available at half price to any rancher within a defined dangerous zone around the infected ranch.

In 1950 eight districts were enrolled in the Assistance Plan. The districts are Faust, Slave Lake, Cold Lake, Edmonton West, Edmonton South, Wetaskiwin, Calgary and Lethbridge. They comprise 154 ranches owning 66,595 mink.

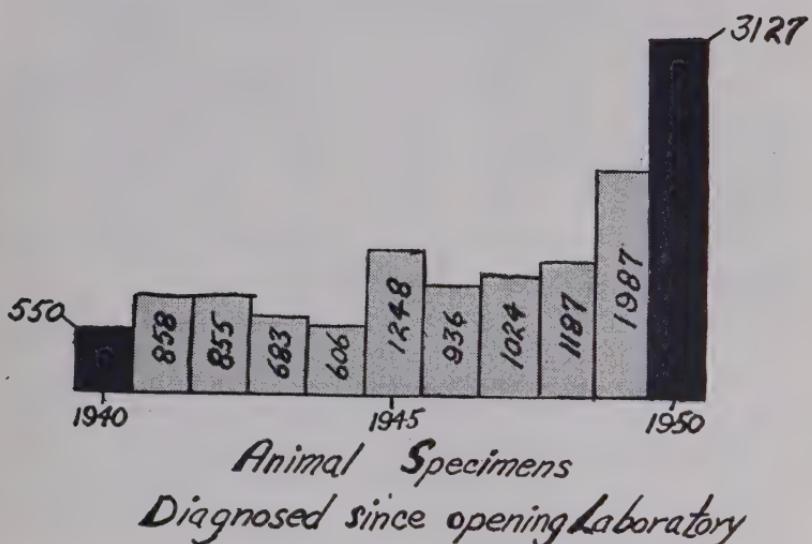
In 1950, 1,600 doses of mink distemper vaccine were issued for distemper outbreaks on two ranches covered by the plan.

Alberta is the only province in Canada with such a program for the protection of its Fur Farming Industry.

## (B) THE ANIMAL DISEASE SECTION

The number of animal specimens submitted to this Section, which is under the direction of Dr. G. S. Wilton, continues to increase each year. During the past year, 3,127 animal specimens were examined, compared to 1,987 specimens in the year of 1949. The graph below shows the number of animal specimens examined each year since the laboratory was established in 1940. The extensive work being carried out has been duly appreciated and it shows much has been done to assist the Veterinarian and the Livestock man in reducing the great economic loss to the province and the individual owner from animal diseases. Each animal examined invariably saved the lives of many on that farm. A diagnosis also frequently affects a whole community. Example of this would be the diagnosis of Bang's Disease, blackleg or malignant œdema.

TABLE 1

TABLE 2  
SPECIMENS

Species	Live	Dead	Portions	Total
Caribou .....	....	....	1	1
Cat .....	....	3	10	13
Cattle .....	5	33	563	601
Chinchilla .....	5	43	....	48
Deer .....	....	1	2	3
Dog .....	10	28	68	106
Fox .....	4	6	....	10
Goat .....	....	1	7	8
Hamster .....	....	1	....	1
Horse .....	....	....	28	28
Marten .....	....	5	....	5
Mink .....	38	208	8	254
Rabbit .....	4	22	13	39
Sheep .....	6	22	50	78
Swine .....	107	221	288	616
Blood Samples .....	....	....	99	99
Fecal Samples .....	....	....	17	17
Feed Samples .....	....	....	89	89
Milk samples .....	....	....	986	986
Semen samples .....	....	....	9	9
Urine samples .....	....	....	35	35
Water samples .....	....	....	50	50
Miscellaneous samples .....	....	....	31	31
TOTALS .....	179	594	2,354	3,127

The specimen table above reveals that the number of swine specimens examined were in the majority, followed closely by cattle and then mink. However, many cattle bloods were tested for brucellosis which are shown in table 3 below. It reveals that there were 28,887 samples tested during 1950 at the Provincial Veterinary Laboratory. This is an increase of 3,629 over that of the previous year. It must also be kept in mind that the majority of the feeder cattle exported to the United States are in the southern part of the province and that all feeding and breeding cattle exported across the line from the southern part of the province are blood tested at the Dominion Veterinary Research Laboratory at Lethbridge. Therefore the number of cattle bloods tested for brucellosis in Alberta is several thousand greater than indicated on the table for the Provincial Veterinary Laboratory.

TABLE 3

## BLOOD TESTS FOR BRUCELLOSIS (BANG'S DISEASE)

	Provincial Blood Tests	Percentages	Dominion Blood Tests	Percentages	Total Number Of Blood Tests	Percentages
Number Positive .....	2,560	9.17%	41	4.25%	2,601	9.00%
Number Suspicious .....	1,191	4.26%	44	4.56%	1,235	4.28%
Number Negative .....	23,799	85.21%	879	91.19%	24,678	85.41%
Number broken or hemolized .....	380	1.36%	0	....	380	1.31%
Total Number of Blood Samples .....	27,930	100.00%	964	100.00%	28,894	100.00%

## CRUDE PETROLEUM OIL POISONING

Late in the fall a farmer in the district of Lethbridge found that 20 head of his cattle became sickly, went off their feed and lost weight. They had had access to the sump of an oil well. The owner following the advice of his veterinarian submitted one animal to the laboratory that had been sickly for two weeks. She weighed 1,200 lbs. prior to illness and when submitted to the laboratory weighed 800 lbs. She had been scouring since the onset. The animal was killed and examined. The rumen was impacted with feed and abundant oil was noted in the stomach contents. The oil caused an atonicity of the stomach, so that feed and oil remained in the rumen.

One quart sealer of the rumen contents were forwarded to the Provincial Analyst. He found eight and one-half ounces of crude petroleum oil in the rumen sample which he received.

## RINGWORM

Ringworm is a fungus infection and is a common condition in cattle. However other animals and men are susceptible. Scrapings from cattle are frequently examined at the laboratory for this disease. This fall, we found the disease in a hutch of rabbits. The owner was quite elated with our findings, as previously his children had contracted the disease and the source of the infection had not been determined. Detailed instruction was given on its eradication in animals.

## MANGE OF SWINE

The large number of hogs examined in the laboratory reveals that Sarcoptic mange is relatively common in Alberta. It is a contagious parasitic disease and although it does not usually cause death in swine it stunts the growth of the young hogs, delaying fattening. The estimated loss on infected premises varies from two to five dollars per animal.

The disease is usually transmitted among swine by direct contact of infected with uninfected animals, but it can be contracted from infected enclosures or equipment used on animals, or objects that are carriers of the mites. The disease spreads slowly during warm weather when animals are on pasture, but rapidly when hogs are closely confined.

Infected premises should be thoroughly cleaned and disinfected, before they are used for healthy hogs. The entire herd on infected premises should be treated. The hogs may be dipped or treated individually depending on the size of the herd. Several preparations are commonly used and are very effective.

## GIARDIA IN CHINCHILLA

This is a protozoan disease which attacks the intestinal mucous membrane. It was found early in the year in one of the Alberta chinchilla ranches for the first time. The owner lost several of his valuable animals and his entire ranch was sickly. The parasite occurs in large numbers in the intestines. Periodic attacks of diarrhoea occur, associated with the passage of large quantities of clear mucous containing multiple parasites. The course of the disease runs from sixteen hours to three weeks.

Post mortem examination in acute cases reveals the lesions to be confined to the intestinal tract. Slight or marked hemorrhages of the gastro intestinal mucosa are found. The chronic picture includes one or more, or a combination of the following; hydrothorax, ascites, anemia, emaciation, impaction of the small and large intestines and/or chronic enteritis.

Diagnosis is made by finding the protozoan in large numbers in the intestinal content by microscopic examination.

Atabrine is used for treatment along with Penicillin and sulfa drugs to combat secondary bacterial infection.

## POULTRY DISEASE SECTION

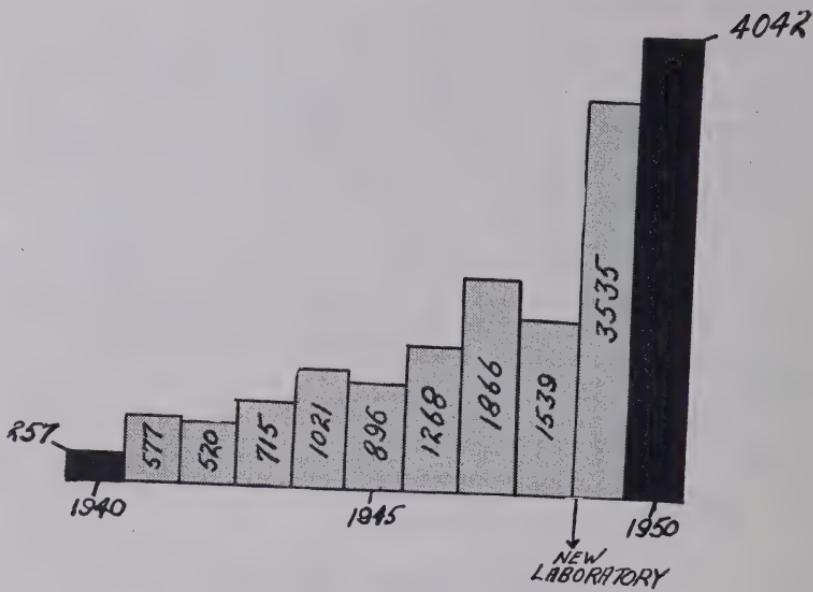
The accurate and rapid diagnosis of poultry disease is a forward policy and can save or prevent the loss of many thousands of dollars to the poultry industry. In poultry production, where the margin of profit is small, disease is of the utmost importance and can mean the loss of all profit and in many cases losses of considerable capital expenditure.

The work of the Poultry Diseases Section under the direction of Dr. C. H. Bigland, of the Alberta Veterinary Laboratory, is devoted mainly to the diagnosis of poultry diseases and recommendations as to the control of the disease diagnosed. Specimens consist of live or dead birds, poultry portions, eggs, poultry blood samples, and poultry feed and water samples.

The number of specimens this section has been called upon to handle has been increasing yearly. The year 1950 was no exception, the number of specimens being 4,042, an increase of 507 (14.5%) over the 1949 figures. The number of consignments also rose from 1,058 in 1949 to 1,316 in 1950, an increase of 19.6%.

This increase in the number of people sending in specimens and increase in the number of sick birds submitted does not necessarily mean that there is more illness among the poultry population of Alberta. Rather, it indicates a greater appreciation of the value of accurate diagnosis of poultry diseases.

The following graph illustrates the increasing number of poultry specimens examined by the Alberta Veterinary Laboratory since its inception in 1940, ten years ago.



### Poultry Disease Specimens Diagnosed Since 1940

The larger volume of specimens voluntarily submitted would appear to indicate general approval and appreciation of the services offered.

It may be noted that the greatest increase in volume took place in 1949, when a full-time Veterinarian was placed on Poultry disease work with the improved facilities of the new Alberta Veterinary Laboratory.

### NEWCASTLE DISEASE

Newcastle Disease was diagnosed for the first time in Alberta in July, 1950, from specimens submitted to the Alberta Veterinary Laboratory. The live virus was isolated from six flocks and Neutralizing antibodies for Newcastle Disease were found in blood serum from five other flocks. Neutralizing antibodies indicates a previous experience with the Newcastle virus, and birds showing this reaction were possibly recovered cases. All positive cases were found during July, August, September and October. No cases were found in November or December of 1950.

The above deals only with specimens submitted to the Alberta Veterinary Laboratory. It is believed that two cases of active Newcastle Disease were diagnosed in the Southern part of the province by the Dominion Research Laboratory at Lethbridge.

The Alberta Veterinary Laboratory is not equipped to conduct virus examination, and so all suspected cases were sent to the Dominion Animal Diseases Research Institute at Hull, Quebec, for final examination. Specimens must be collected first, frozen, and then packed with dry ice and shipped by air express. Specimens of birds from 77 different premises were submitted to Hull for Newcastle Disease examination in this way.

As Newcastle Disease is covered by the Dominion Animal Contagious Diseases Act actual handling and control of affected flocks is dealt with by the Dominion Health of Animals Division. Whenever Newcastle Disease was suspected by this laboratory, the Dominion Veterinarians were notified. Their first step was to quarantine the premises until a laboratory diagnosis from Hull had confirmed or disproved suspicious. If the diagnosis was positive, all birds on the premises were destroyed and full compensation paid.

To assist in preventing the spread of Newcastle and to aid in controlling the disease, all cases possible had to be reported. In order to further this end, this branch distributed leaflets explaining the symptoms of the disease, procedure to follow if suspected, means of prevention, and other precautions to be taken in control work. Several radio addresses were given, meetings attended, and news releases given dealing with Newcastle Disease information.

### NEWCASTLE DISEASE SURVEY

In an effort to find the extent of past Newcastle infection in Alberta, a Newcastle Disease Survey was started. This consists of the collection of representative blood samples by the Poultry Branch and the Veterinary Service Branch from various flocks throughout the province. Preparation of serum from these samples and sending them to the Animal Diseases Research Institute at Hull, Quebec, for Newcastle Disease examination is handled by this laboratory. 992 blood specimens from 77 different flocks had been handled at the year's end. All of these were negative to the Newcastle test. The survey will progress well into 1951.

### AVIAN TUBERCULOSIS

The educational campaign on Avian tuberculosis was continued through 1950 to acquaint poultrymen farmers and hog raisers on the control of this disease, as it involves chickens, turkeys and hogs.

Avian tuberculosis was diagnosed in 191 specimens this year, placing this disease at the top of the poultry disease table. This is an increase of 35 or 22.5% on 1949 figures, and indicates that avian tuberculosis is still a major disease problem in Alberta, in fact, the major bacterial disease killer diagnosed at this laboratory.

It is hoped that the large number of pamphlets distributed, the radio talks and other forms of education about avian tuberculosis is responsible for the larger number of specimens of this condition submitted for accurate diagnosis.

### PULLORUM DISEASE

Salmonella pullorum was isolated from 129 chicks, turkey poult and adult fowl in 1950. Cultures from each pullorum flock were submitted to the adult fowl in 1950. Cultures from each pullorum flock were submitted to the Ontario Agricultural College for typing. This procedure was requested by the Dominion Pullorum Conference.

The wholeblood pullorum testing of birds producing hatching eggs by the Poultry branch is highly instrumental in the control of this disease in Alberta.

### SALMONELLOSIS (Paratyphoid Infection)

148 chicks and turkey pouls were found to be suffering from *Salmonella* infections other than *Salmonella pullorum* at this laboratory in 1950. Infection with this group of organisms can cause a high death rate among turkey pouls and chicks. Because of the fact that many outbreaks of food poisoning and enteritis in humans has been traced to infection with various types of *Salmonella* organisms, we submitted representative cultures to the Provincial Public Health Laboratory for accurate serological identification.

The following table gives the number and types identified, many of the same types have also been isolated from human infections.

Type		SALMONELLA TABLE	Number
<i>Salmonella anatum</i>	.....		1
<i>Salmonella oranienburg</i>	.....		22
<i>Salmonella minnesota</i>	.....		1
<i>Salmonella bredeney</i>	.....		3
<i>Salmonella barielly</i>	.....		6
<i>Salmonella kentucky</i>	.....		5
<i>Salmonella thompson</i>	.....		8
<i>Salmonella newington</i>	.....		4
<i>Salmonella typhimurium</i>	.....		6
TOTAL	.....		56

### POISONS

It will be noted that poisoning of various types was diagnosed in 36 specimens during 1950. These included lead, zinc, arsenic, mercury, carbon monoxide, lye and phosphorous poisonings. As many of these could also endanger human life and many could be prevented, it is felt that further work should be done to determine sources of poisons, and so recommend precautions against them.

We are indebted to the Provincial Analyst, J. A. Kelso, and C. E. Noble for the great amount of work in chemical analysis for the detection of these poisons.

### FEEDING EXPERIMENTS

Several experiments involving 100 turkey pouls were undertaken to check on the possible deficiency of Vitamin "D" in the feeds.

### RADIO TALKS AND ADDRESSES

Several radio talks and addresses were given during 1950 on Poultry Diseases and selected subjects.

### SCIENTIFIC ARTICLES

Three scientific articles from this laboratory have been published in the Canadian Journal of Comparative Medicine in 1950. The titles were: "Ascites and Oedema of Brooded Turkey Pouls in Alberta," "Report of a *Salmonella* (Paratyphoid) Survey in Alberta," and "A Report on the Isolation of *Listeria* (*Listerella*) Organisms from a Canary and a Chicken in the Province of Alberta".

## SPECIMEN TABLE

Species	Live	Dead	Portions	Total
Chicken .....	1,053	907	75	2,035
Turkey .....	286	488	16	790
Egg Samples .....	...	...	19	19
Feed Samples .....	...	...	61	61
Water Samples .....	...	...	24	24
Milk Sample .....	...	...	1	1
Goose .....	...	2	1	3
Pheasant .....	9	5	2	16
Peacock .....	...	2	...	2
Sea Gulls .....	...	6	...	6
Ducks .....	2	6	...	8
Pigeon .....	1	3	...	4
Budgerigar .....	1	3	...	4
Grouse .....	...	42	...	42
Prairie Chicken .....	...	3	...	3
Partridge .....	...	1	1	2
Canary .....	...	...	1	1
Miscellaneous Wild Birds .....	...	17	...	17
Miscellaneous .....	...	...	12	12
Blood Specimens .....	...	...	992	992
<b>TOTAL</b> .....	<b>1,352</b>	<b>1,485</b>	<b>1,205</b>	<b>4,042</b>

## (D) MICROPATHOLOGY SECTION

Dr. G. K. Weir, Micropathologist, is in charge of this section of the laboratory, which further increases the efficiency of the diagnostic service to the livestock and poultry industries.

Much of the work is very tedious, involving minute and exacting techniques with tissue sections so that cellular changes, indicative of disease, are evident.

Species	Tissues Sectioned
Horse .....	10
Cattle .....	70
Deer .....	2
Dog .....	55
Guinea Pig .....	1
Sheep .....	8
Swine .....	30
Poultry .....	74
<b>Total</b> .....	<b>250</b>

Species	FUR-BEARING ANIMALS	Tissues Sectioned
Chinchilla .....	...	7
Fox .....	...	10
Mink .....	...	114
Rabbit .....	...	6
<b>Total</b> .....	<b>...</b>	<b>137</b>

Inclusion bodies were demonstrated in nine mink bladders indicating a positive diagnosis of distemper.

Twenty-two rats were mounted in preservative fluid in plastic cases for the Field Crops Branch for the rat control campaign. The Field Crops Branch had the rats mounted in order that the residents of Alberta will recognize these rodents when they see one.

Twenty-six museum specimens were mounted in plastic boxes. These included specimens showing such diseases as rickets in hogs, foxes and mink, swine erysipelas, poultry and bovine tuberculosis, leucosis of poultry, etc. These mounts are for both museum and educational purposes. For example, the mounted specimens of bovine tuberculosis were used extensively at the large number of meetings to promote T.B. Restricted Areas. These visual aids show the livestockmen the damage done by the disease and lead to a fuller understanding of the importance of prevention and control.

The pathology laboratory co-operates with the poultry and animal disease laboratories in order to assist them in making a positive diagnosis. This is especially true with virus diseases, such as distemper in mink, types of tumors to determine whether they are malignant or not, etc.

The number of specimens received for histopathological examination from veterinarians has increased a great deal since the opening of a micro-pathology department in the Veterinary Laboratory.

## REPORT OF FUR FARMS BRANCH

D. R. Fraser—Fur Farm Supervisor

The Alberta Fur Farming outlook in 1950 was considerably more promising than it had been for several years. The overall production increase of approximately three kits per female kept was very satisfactory. Disease outbreaks were at a minimum and during the year the pelt market levelled off at 10% to 15% higher than opening sales.

Mink pelts in particular were very much in demand and with the opening of the new marketing season in December practically no carry over of pelts at the Fur Auction Houses was found. This condition leaves the market in a good healthy condition and assures the Fur Farmers that competition for quality pelts will be keen.

Since October there has been a marked improvement in the demand for breeding stock, several shipments have been made from Alberta fur farmers to British Columbia, Saskatchewan, Manitoba, Ontario, Quebec and to several States in the Union.

The necessity of credit extension to fur farmers by Feed Supply Companies, Fur Auction Houses and banks throughout 1950 was far less than during the years 1948 and 1949. This was due mainly to the fact that with the improved fur market conditions many ranchers were enabled to consolidate their operations financially.

This province has gradually forged its way into first place as the leading ranch mink producer in the Dominion. Alberta now produces 33½% of the Dominion total of standard and mutation ranch mink pelts. Latest Federal returns give this province a 40,000 pelt lead over its nearest competitor who for many years topped the Dominion in ranch mink pelt production.

During 1950 the Fox division of the Fur Farming Industry remained in a depressed state. However, year end fashion and market reports would indicate that designers and manufacturers are displaying more interest in select quality fox pelts which is encouraging. Throughout the year thousands of fox pelts were used by the trade for trimming cloth coats and other garments. This in itself assisted to eliminate the pelt surplus that has accumulated these past few years.

There is little doubt but that the bottom of this particular fox pelt cycle has been passed. How quickly and to what levels fox pelt prices will advance in the next few years, depends upon general business conditions throughout the world and the return to the production of quality pelts by the fur farmer. Records indicate that in past years as high as 65% of the fox pelts appearing on sale graded inferior; the remaining 35% were not all superior types of pelts. This in itself did much to ruin fox furs in the eyes of the purchasing public.

### STOCK:

Ranch Mink still lead the field in popularity. Fox, Chinchilla, Rabbits, Marten and Beaver follow in the order of their mention. As a new addition to the Fur Farming industry in Alberta during 1950 there is the Fisher, the largest and possibly the handsomest member of the weasel family resembling a large black marten. An Edmonton Fur Farmer imported a trio of these animals from Eastern Canada and from all reports he is exception-

ally well pleased with his new venture and intends to build up a herd of these fine animals.

### FUR MARKET:

After February sales the Fur Market showed a steady price increase continuing to the marketing year end in November. There is practically no carry over of previous season pelts and the market would appear to be in a good healthy condition for the commencement of the new season, showing approximately a 15% increase over the same date last year.

World conditions no doubt will prevent prices from meeting the expectations of many, however, fur farmers will still realize a reasonably profitable return for pelts of quality.

All types of mutations are being well competed for, particularly pastels.

In recent mutation mink sales there has been a very marked discount for small sizes, in cases where selected males realized between \$40.00 and \$48.00 the trade expected to obtain smaller sizes and females at a discount of from \$15.00 to \$20.00. This point is certainly worthwhile noting and it would certainly pay those ranchers whose mink are short on size to watch their breeding and feeding programs more closely this forthcoming year.

Once again the importance of producing size and quality is quite evident from the following analysis of one of the major Montreal Sales held on December 8th.

Skins	%	Price Range
54	.1	At \$31.50
145	.4	From \$29.00 to \$31.00
1,545	4.2	" \$26.00 to \$28.50
2,999	8.1	" \$23.00 to \$25.50
5,223	14.1	" \$20.00 to \$22.50
12,577	34.0	" \$17.00 to \$19.75
11,888	32.2	" \$14.00 to \$16.75
2,489	6.7	" \$11.00 to \$13.75
64	.2	" \$ 8.00 to \$16.50
36,984	100%	

It is gratifying to note that again this year one Alberta Fur Farmer realized the top price of the standard mink sale at Montreal for a bundle of his pelts. This year honor came to a Calgary Fur Farmer whereas last year it went to an Edmonton man.

### FEED SUPPLY:

The supply of all types of Fur Animal Feeds was adequate to meet the demands and at a price that the Fur Farmers could afford to pay. Now at the year end with a satisfactory marketing season underway it is rumored from reliable sources that the price of horse meat will be increased by at least 50c per cwt.

The fact that thousands of tons of horse meat are exported from this province annually both to other provinces and to the U.S.A. as feed for fur-bearers and also for the manufacture of pet foods is causing some concern. The rapidly dwindling supply of horses will eventually be used up and the Fur Farmers will have to search for other types of feed to take the place of horse meat. Local organizations have been advised that it might be well to start now to prepare for this eventuality by organized research programs and experimental work on a national basis as the shortage will no doubt exist throughout the country.

**FIELD DAYS:**

Live Fox and Mink Educational Field Days and Field Day Meetings were held during October and November at the following points: Stettler, Red Deer, Medicine Hat, Seba, Canyon Creek, Slave Lake, Joussard, Faust, Lac La Biche, Roundhill, Wildwood, Edmonton.

The field day attendance and entries were excellent in all districts. Grading cards were used in lieu of the prize ribbons excepting at Faust and Lac La Biche. In these two districts regular shows were conducted with almost 200 entries in each case.

In all districts a film on the "Preparation of Pelts for Market" was shown. In addition to the picture, in the outlying districts where the services of a Veterinarian are not readily available Dr. J. G. O'Donoghue, the Extension Veterinarian, gave a demonstration on "Sperm Checking Mink".

**FUR FARMING COURSES:**

In January and February a series of lectures on Fur Farming and also instructions on pelt grading were given to the students of the Vermilion and Olds Schools of Agriculture. These courses will be conducted again in 1951 at both schools.

**FUR BREEDERS' ORGANIZATIONS:**

The Alberta Fur Breeders' Association was again quite active. Their new policy of working more closely with the local branches has stimulated interest and thus increased their membership throughout the province.

A new venture was undertaken during the year in the way of an association bulletin. This publication known as the "Alberta Fur Breeders'" contains news items and articles of educational value, and is supplied free of charge to every licensed Alberta Fur Farmer. This quarterly publication has been very well received and the Association intends to continue with it this next year.

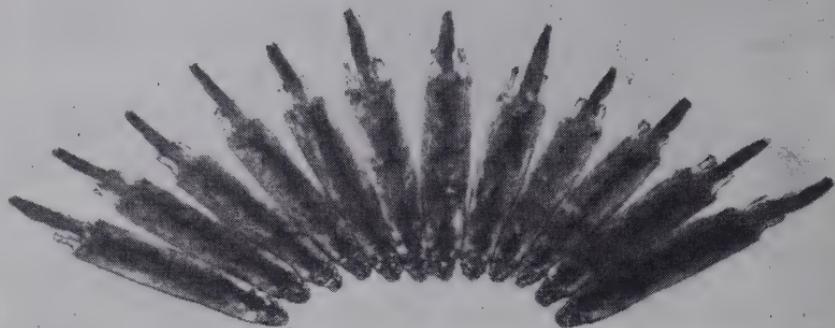
The Fur Farm Supervisor acted on the meeting and entertainment committee of the Edmonton Fur Breeders' Association and on the publicity and show committee of the Alberta Association. Speakers, films and entertainment were provided for 20 meetings, including special meetings at Red Deer, Medicine Hat, Calgary, Stettler, Lac La Biche, Faust, Seba and Roundhill.

The following Ranch Fur Promotions were organized and presented during the year:

- "Ranch Fur Week," Province Wide January, 1950.
- "Annual Pelt Show," Edmonton, January, 1950.
- "Ranch Fur Display," Edmonton Exhibition, July, 1950.
- "Fur Fashions of 1951," Edmonton, November, 1950.
- "Annual Live Animal Show," Calgary, November, 1950.

**PELT SHOW:**

The annual Mink and Fox Pelt Show was held in January at the Massey Harris Co. Show Room. Five hundred and ten entries were submitted for judging. Messrs. Wm. Levine and J. Keith of the Edmonton Fur Auction Sales handled the judging in both the mink and fox classes.



ALBERTA RANCH MINK PELTS  
The type that top Montreal Sales

#### LIVE ANIMAL SHOW:

The thirteenth successive annual show was held on November 28th, 29th and 30th at Calgary. This year for the first time in thirteen years, foxes were not shown due solely to lack of support by the majority of disheartened fox ranchers. With the anticipated return to better prices no doubt foxes will again be included in the Live Animal Show another year.

The mink entries totalling 437 were received from practically all over Alberta as well as from British Columbia, Saskatchewan and Quebec.

The Judge was Mr. Herbert Meager from New York.

#### HEALTH:

Sickness on Alberta Fur Farms during 1950 was at a minimum. The Northern Lake area that had suffered such heavy mink losses during 1949 from Steatitis or "Yellow Fat" found that there was no recurrence of this ailment during the year other than the odd isolated case of one or two animals.

#### FUR FARM INSPECTIONS:

The fur farms branch was fortunate in having once more the services of Mr. H. W. Sutherland of the Olds School of Agriculture to assist with this work during the summer months. Fur Farm Inspections were made in forty-two districts from Medicine Hat in the South East to Joussard in the North.

#### DISTEMPER VACCINE:

In order to assist in the control of distemper in fur-bearing animals a Distemper Vaccine Assistance Plan was drafted and accepted by the Department of Agriculture and the Alberta Fur Breeders' Association. It is now in operation in all the larger Fur Ranching districts in the Province.

The Alberta Fur Breeders have requested that this branch convey their sincere thanks to the Government of Alberta and particularly to the

## ANNUAL REPORT, 1950

125

Department of Agriculture for their co-operation in this regard. The Distemper Vaccine Assistance Plan is the first of its kind on the continent and has caused widespread interest. A movement is under way at present by other provincial organizations to have their provincial governments organize similar plans to assist in the control of this dreaded disease.

## FUR FARM STATISTICS FOR YEAR ENDING AUGUST 31, 1950

## NUMBER OF ANIMALS DECLARED ON FUR FARMS IN ALBERTA 1949-50

Kind of Animal	Total No. of Animals	Av. Value Sept. 1/49	Total Valuation
Fox, Silver .....	10,485	\$22.75	\$238,533.75
Fox, Cross .....	87	10.50	913.50
Fox, Red .....	4	5.25	21.00
Fox, White .....	8	14.00	112.00
Mink, Standard .....	136,067	18.23	2,480,501.41
Mink, Mutation .....	53,992	22.16	1,196,462.72
Marten .....	135	36.00	4,860.00
Chinchilla .....	828	50.00	41,400.00
Fitch .....	58	4.00	212.00
Nutria .....	.12	3.50	42.00
	201,671		\$3,963,058.88

## NUMBER OF ANIMALS PELTED ON FUR FARMS IN ALBERTA 1949-50

Kind of Animal	Total No. of Animals	Av. Value Fall 1949	Total Valuation
Fox, Silver .....	7,243	\$14.53	\$105,240.79
Fox, Cross .....	14	5.00	70.00
Fox, Red .....	Nil	....	....
*Fox, White .....	15	13.70	205.50
Mink, Standard .....	93,428	13.56	1,267,019.28
Mink, Mutation .....	37,784	15.04	568,271.36
Marten .....	8	36.00	288.00
Chinchilla (unsold) .....	4	....	....
Fitch .....	21	2.50	52.50
Nutria .....	Nil	....	....
	138,527		\$1,941,147.43

\* Includes stale pelts.

## NUMBER OF LIVE ANIMALS EXPORTED FROM ALBERTA 1949-50

Kind of Animal	Total No. of Animals	Av. Value Per Animal	Total Valuation
Fox, Silver .....	86	\$35.00	\$3,010.00
Fox, Cross .....	Nil	....	....
Fox, Red .....	Nil	....	....
Fox, White .....	Nil	....	....
Mink, Standard .....	169	37.50	6,337.50
Mink, Mutation .....	106	40.00	4,240.00
Marten .....	30	50.00	1,500.00
Chinchilla .....	284	50.00	14,200.00
Fitch .....	Nil	....	....
Nutria .....	Nil	....	....
	675		\$29,287.50

## NUMBER OF ANIMALS RETAINED FOR BREEDING STOCK IN ALBERTA 1949-1950

Kind of Animal	Total No. of Animals	Av. Value Per Animal Dec. 31/49	Total Valuation
Fox, Silver .....	3,156	\$25.94	\$81,866.64
Fox, Cross .....	73	12.50	912.50
Fox, Red .....	4	5.25	21.00
Fox, White .....	Nil	....	....
Mink, Standard .....	42,460	20.95	889,537.00
Mink, Mutation .....	16,102	25.72	414,143.44
Marten .....	97	60.00	5,820.00
Chinchilla .....	540	95.00	51,300.00
Fitch .....	32	4.00	128.00
Nutria .....	12	3.50	42.00
	62,447		\$1,443,770.58

## FUR FARM LICENSES 1949-1950 SEASON

Fox .....	58
Fox and Mink .....	62
Mink .....	1,022
Marten .....	2
Marten and Mink .....	4
Fitch and Mink .....	3
Nutria .....	2
Chinchilla .....	41
Chinchilla and Mink .....	2

1,196

## REPORT OF APICULTURE BRANCH, 1950

**W. G. leMaistre, Provincial Apiarist**

Alberta honey production, in spite of the fact that honey plant and climatic conditions were favourable, declined considerably in 1950. A production of 4,851,000 pounds compared to 5,800,000 pounds the previous year is a reduction of sixteen percent. The average production per hive of 99 pounds was only two pounds less than the average for the last five years of 101 pounds.

The cause of the decline were primarily economic. The cost of producing honey in relation to its selling price made beekeeping an unattractive enterprise. It is an enterprise that can be quickly started and as quickly abandoned. There is no great outlay in buildings and equipment. The stock—the bees—are usually renewed annually in any event.

Honey is not a necessity in the diet and therefore the market for it is sensitive to supply and price of competitive foods.

Disease had a small though measurable (120,000 pounds) effect on the total crop.

Though the number of beekeepers declined by 17% the number of hives declined by only 6%. This denotes a continuation of the trend of greater specialization in the industry. Approximately 75% of the honey is produced by commercial or semi-commercial operators.

**GENERAL:**

Prospects of a railway express strike and an announcement that express rates would be increased from 65c to \$1.30 per package instituted the practise of trucking bees from California on a large scale.

The cost of bees is the largest single expense in operating. Prices of bees varied from \$4.00 per two pound package to \$6.75 per three pound package laid down in Alberta. This is a 20% reduction from the previous year.

The wintering of bees in Alberta should be quite feasible. There was an 18% increase in number of hives put into winter quarters. However, the winter of 1949-1950 was extremely severe and winter loss was very high, being 43%.

Alberta honey, exhibited at the Royal Winter Fair, Toronto, took four prizes—two firsts, a fifth and a seventh. The successful exhibitors were L. Regamey, North Edmonton, and Dempster Havens, Patricia.

This Branch maintains a honey grading service. Any beekeeper or honey packer wishing to ascertain the grade of his honey can do so by sending in representative samples.

Moisture content is determined by use of a refractometer and Chataway tables.

In previous years several hundred samples were received from honey packers. This entailed considerable work. These packers have now been instructed in doing their own grading. Reference is made to this Branch in cases of dispute between producer and packer.

Determinations of grade were made on 72 samples.

**SEASON:**

Cool early spring weather limited natural supplies of food for colonies; where feeding was neglected colonies failed to build up properly for the honey flow. The main honey flow began about the normal season, the middle to the latter part of June. It was very intense for two weeks and then tapered off rapidly in many districts.

Plant growth, as a result of very dry conditions, was such that nectar yields were severely limited. A second flow in late summer did not materialize as dry conditions persisted.

One characteristic of the season was a period of greater than usual maximum temperatures. This seemed to stimulate nectar gathering while it lasted especially from alfalfa. Another characteristic was a complete cessation of the honey flow in the west central part of the province about the middle of July. Honey yields in this area were very small indeed.

**MARKETING:**

Some improvement in the market for honey was observed during the year. The stocks held by the Dominion Government under the price support programme were sold as was all the 1948 surplus held by beekeepers. There was some carry-over of the 1949 crop, but probably only sufficient to supply the deficiency resulting from a much smaller 1950 crop.

Though prices of honey increased about 10% it is not yet high enough to encourage production.

The factors affecting the improvement of the market were advertising, smaller Canadian crop, population increase and price of competing foods. Alberta honey was shipped to every province in Canada. Almost 60% is marketed outside the province.

**DISEASE CONTROL:**

Twelve inspectors were appointed under the Bee Diseases Act. Insofar as possible, these inspectors are appointed to districts where the most benefit may be obtained from their work. The most advantageous time for inspection is brief, during June and early July and though special conditions make it necessary to inspect and regulate at other times, most of the work is concentrated into that period.

	1949	1950
No. of colonies inspected .....	7,240	8,285
No. of Apiaries inspected .....	1,112	1,092
No. of hives diseased (A.F.B.) .....	1,815	1,108
Diseased hives % of total .....	2.4	2.8

The amount of disease has remained fairly constant during the past year. This is encouraging since under the present conditions of the industry an increase could reasonably have been expected. It is quite widely distributed throughout the province with major outbreaks occurring in the Westlock and St. Paul districts. Other colonies have been infected at Patricia, Gem, Rosemary, Calgary, Red Deer, Alliance, Edmonton, Athabasca and Falher.

This Branch supervises the operation of two wax melting units. A new unit was put into operation this year similar to the one designed and constructed last year. Wax has been melted from 9,000 supers and equipment for 2,000 colonies has been treated for American foulbrood. Treatment of diseased equipment with lye solution did not prove practical on a com-

mercial scale. The procedure of burning the frames and scorching the supers, tops and bottoms is still being carried out. Nevertheless, the salvaging of the wax and equipment has saved the beekeepers considerable loss and encouraged sterilization of diseased equipment which otherwise would not have been done and would have remained a source of contamination to healthy colonies in the district.

This Branch maintains a diagnostic service. Samples of suspected disease are examined, the sender advised of results and treatment for affected colonies is recommended.

#### SAMPLES:

	1949	1950
American foulbrood .....	65	34
European foulbrood .....	17	8
Sacbrood .....	2	9
No disease .....	18	2

Annual registration of beekeepers is required for purposes of controlling disease.

	1949	1950
No. of beekeepers registered .....	2,500	3,822
No. of beekeepers not registered (Est.) .....	2,500	610
No. of hives registered .....	27,800	39,864
No. of hives not registered (Est.) .....	27,800	10,184

#### EXTENSION:

This Branch supplies speakers to attend meetings, demonstrations and short courses. The demand for instruction in beekeeping has been much reduced. There were twenty-three meetings at which beekeeping information was given.

Press notes and radio talks on timely subjects are prepared throughout the season. Bulletins and correspondence supply information when requested. Growers of legume seeds have been making requests for information regarding the use of honeybees as pollinators.

#### BEEKEEPERS ORGANIZATIONS:

The Provincial Apiarist is secretary-treasurer of the Alberta Beekeepers' Association. This Association concerns itself with the general welfare of the industry. It is a good point of contact with the Branch.

#### INVESTIGATIONS:

##### I. Diseases:

What appeared to be an unidentified disease found in the Winfield district received further attention.

Twelve colonies at the experimental apiary at Oliver were assigned to this work. Eight of these were inoculated with what appeared to be distinct organisms in 14% sugar solutions; one with a filtrate; one with whole disease larvae; one with a combination of all organisms and one control colony.

Regular examinations and reinoculations were made up to July 3. At that time the only colony showing abnormality had a recognizable case of European foulbrood. This was the colony inoculated with suspension of whole dead larvae.

It is assumed that the unidentified organisms used were either forms associated with European foulbrood or had no direct connection with the development of the disease in the colonies. It was recognized that Euro-

pean foulbrood existed in the colonies at Winfield. No other disease was reproduced in the experimental colonies.

No means of arresting this disease has been discovered. It is not yet known whether it will persist at Oliver as it does at Winfield.

## 2. Wintering:

Specially designed wintering cases, made of corrugated cardboard were tested at Scandia, Red Deer, Edmonton and Flatbush. The bees wintered reasonably well—15% loss.

It was hoped the cases could be used for two or three years, thus reducing the cost. It was found that this type of case collapsed and came apart and had to be discarded.

Further tests have been begun using a somewhat smaller and cheaper case of different construction. This method of wintering would be practical if a suitably economical case could be obtained.

## 3. Trucking:

Bees in packages are highly perishable. Great losses can occur through improper handling and transportation between the hives where they originate in the United States and the hives in Alberta.

Observations were made on trucking methods. The results of these observations are summarized.

1. Optimum temperatures are between 65 degrees and 75 degrees Fahr. Damage and loss of bees is very heavy beyond these ranges.

2. Delays—even for half an hour when it is warm will result in rising temperatures. Trucks must therefore be in good condition and properly equipped.

3. Truck box must provide for ventilation at front, top and sides that can be opened and closed as the temperature of the load requires. Ventilators should be arranged to avoid collecting dust and exhaust fumes and creating a direct draught on the packages.

4. Jarring the bees from their cluster, especially when below 50 degrees Fahr. will result in loss. If this happens the truck should be stopped and the load allowed to warm up and the bees reform their cluster.

5. Spraying with water materially reduces temperatures of heating load as does travelling.

In case of delays in warm weather water sprays should be used. Stopping on the road in sheltered place or even in a garage will permit a chilled load to regenerate heat.

6. Overloading and badly balanced loads present a problem. When too high, wind pressure reduces speed and increases fuel consumption. When too much rear overhanging load tilts in the mountains.

7. There should be two drivers so that stops for sleeping are unnecessary. Such stops are only possible providing temperatures permit. One of the drivers should be acquainted with bee behaviour.

8. At least three thermometers should be dispersed in the load and read at frequent intervals.

## STATISTICS:

	Honey 1949	Honey 1950	Wax 1949	Wax 1950
Total Production '000 lbs. ....	5,800	4,851	82	64
Average net price per lb. ....	.10	.10	.30	.40
Value in '000 dollars .....	580	485	24	26
	1949	1950	% Change	
No. of Beekeepers .....	5,000	7,930	- 21	
No. of hives .....	55,000	49,000	- 10	
No. of hives per beekeeper .....	11	12		
Average Production .....	106	99	- 7	

## REPORT OF SCHOOLS OF AGRICULTURE BRANCH

R. M. Putnam, Superintendent School of Agriculture.

C. E. Yauch, Principal, Olds School of Agriculture.

N. N. Bentley, Principal, Vermilion School of Agriculture.

### GENERAL

The Schools of Agriculture and Home Economics at Olds and Vermilion again operated at capacity during 1950. A total of 192 diplomas were presented to students who had successfully completed courses in Agriculture and Home Economics at the Graduation Exercises on April 5th.

	Olds	Vermilion	Total
Diplomas in Agriculture .....	67	63	130
Diplomas in Home Economics .....	33	29	62
	<hr/> 100	<hr/> 92	<hr/> 192

The Schools continue to attract boys to a greater degree than girls. While some boys were refused admission because of a lack of accommodation, the number of girls attending was barely enough to fill the dormitories. If this trend continues special attention to the situation will be required.

Considerable time was spent during the year on the revision of courses and on the preparation of detailed outlines. This work was considered necessary in order to examine the present courses and to attain a more desirable degree of uniformity at the two Schools. In the operation of Agricultural Schools constant attention is required to the subject matter of the courses in Agriculture and Home Economics.

No major staff changes occurred during the year, although a number of replacements took place due to the resignation of several of the former staff. Details of these changes will be found in the reports of the Principals.

A small brochure was prepared and distributed through offices of the Department, Junior Clubs, Alumni Associations of the Schools and High Schools. This literature was intended to acquaint prospective students with the facilities of the Schools. Ten thousand copies were distributed.

### SUMMER PROGRAM

Little change in the Summer Program occurred from that of last year. The usual number of courses were conducted for Rural Youth and Farm Women. Many other organizations related to the agricultural industry made use of the facilities of the Schools for gatherings of various types during the summer.

The members of the School staffs who were not required at the Schools for the summer devoted more time than heretofore to Junior Club Work. It is the intention of the Department to utilize the staff members to even a greater extent in Junior Club Work.

### EXPANSION

The new School of Agriculture at Fairview was practically completed by the end of the year and will be in operation in 1951. Considerable work remains to be done on the grounds, but the buildings were finished



School of Agriculture, Fairview

in the early Fall. This School will accommodate about 120 students. Much of the furnishings and equipment had been secured by the end of the year. It is of modern construction and a plant that will fill the requirements of the Peace River Area.

A new garage was erected at Vermilion and a small greenhouse was completed at Olds.

Many improvements were made at Olds and Vermilion by the re-plastering, re-decorating, and re-painting of several buildings and classrooms. This work has greatly improved the appearance of the premises and the attractiveness of the institutions. It is the intention to work out a schedule which will permit some work being done each year and thus maintain the institutions in good repair.

### SCHOOL FARMS

A poor crop was harvested at Vermilion and Fairview, but at Olds the yield was good. Some additional feed was purchased to provide for the live stock. The Department purchased a large White English boar at the Auction of British Live Stock held in Brandon on October 21st and at the time of the Toronto Royal two gilts of the same breeding were secured. These animals were placed at Olds. A new Shorthorn herd sire was obtained for Olds and a Suffolk ram was purchased for Vermilion.

The dairy herd at Vermilion provides milk for the School and it is hoped that similar arrangements will be made at Olds in 1951.

### 1950-51 TERM

Enrolment at Olds and Vermilion for the 1950-51 term was 367. The number of girls enrolled was 10 less than in 1949-50.

	Olds	Vermilion	Total
Agriculture:			
First Year .....	50	61	111
Second Year .....	42	40	82
Two-in-One .....	33	24	57
- - -	-	-	-
Home Economics:	125	125	250
First Year .....	28	27	55
Second Year .....	17	19	36
Two-in-One .....	12	14	26
- - -	57	60	117
TOTALS .....	182	185	367

The average age of the students remains at about 18½ years. Since no boys were accepted under 17 years of age the average is slightly higher than might be expected.

**BOARD OF AGRICULTURAL EDUCATION**

The Board of Agricultural Education held its Annual Meeting on June 13th. All members of the Board except two were present and several visitors from the Department of Education, including the Honourable Ivan Casey were in attendance.

The Board devoted most of its discussion to the question of agricultural education in the High School and the Schools of Agriculture. It decided to conduct a small survey of the members and to pursue the discussion at its next meeting.

**APPRECIATION**

I should like to express to the Principals and staffs of the two Schools my appreciation for their co-operation in undertaking the revision of courses and other endeavours during the year.

The appreciation of the Schools of Agriculture Branch is also extended to the Alumni Association of both Schools for their efforts in supporting the work of the Schools and in encouraging young people to attend.

## OLDS SCHOOL OF AGRICULTURE

The 1949-50 term of the School closed on April 5, 1950, with the presentation of 33 diplomas in Home Economics and 67 in Agriculture. Mr. Donald Cameron and Mr. N. E. Cook, M.L.A., were guest speakers for the occasion. Mr. R. M. Putnam represented the Department of Agriculture and presented the prizes. Mr. J. M. Bodman, a student who had had twelve years service in the R.A.F., was valedictorian.

### SPECIAL LECTURERS AND OTHER VISITORS

Short courses in Irrigation, Animal Sanitation and Fur Farming were given to the regular students in the two-in-one and second year classes during the spring term by the following instructors:

W. L. Jacobson, Irrigation Specialist, Lethbridge Experimental Station.

Dr. O'Donoghue, Veterinary Services Branch, Department of Agriculture.

D. R. Fraser, Fur Farm Branch, Department of Agriculture.

Representatives of the Alberta Department of Agriculture and other government and commercial agencies who spoke to the students during the term included: P. D. Hargrave, Miss Esther Nelson, W. H. T. Mead, Dr. E. E. Ballantyne, C. A. Weir, W. G. leMaistre, A. M. Wilson, F. H. Newcombe, a representative of Swift Canadian; D. H. McCallum, W. C. Gordon, Miss Joyce Lewis.

The School was also visited during the year by the following officials from other countries:

Peter Young, British Trade Commissioner.

Mr. Michele, Michigan State Agricultural Extension.

Dr. Nannini, Department of Education, Italy.

A group of British Agricultural Scientists.

### SPECIAL EVENTS DURING THE SPRING AND FALL TERMS

January 6—D. P. Hargrave—an illustrated lecture.

February 17—A visit from the Vermilion School of Agriculture by a group of students and staff.

March 3—Norman Kennedy—a vocal recital.

March 18—The Little Royal.

March 29—Achievement Day.

April 5—Graduation Day.

October 24—Registration Day.

November 24—Alumni Reunion.

### SCHOLARSHIPS AWARDED, APRIL, 1950

Scholarships from the Alberta Surplus Wheat Board Money Trust:

(a) Scholarships of \$100.00 each toward expenses of first year at University of Alberta—

Agriculture—Greta Wuth, Rat Lake; Tom Moore, Seven Persons; Hugh Bradley, Lacombe.

Home Economics—Ivy Noreen Blair, Picture Butte; Barbara Weston, McMurdo, B.C.

(b) Scholarships of \$75.00 for general proficiency tenable at the School of Agriculture in the Second Year of the course—Jim Miller, Rockford; Rita Hopkins, Airdrie.

O.S.A. Alumni Association Scholarships, \$50.00 each:  
Agriculture—Dean Suggett, Bentley.

Home Economics—Lita and Rita Archibald, RR. No. 3 Lacombe.

The Alberta Seed Growers' Co-operative Scholarship, \$50.00—  
Harold Schielke, Carstairs.

The Alberta Women's Institutes Scholarship, \$50.00—  
Edith Edge, Cochrane.

The Robert Gardiner Memorial Scholarship, \$50.00—  
Robert Thomas, Olds

The Alberta Turkey Breeders' Association Scholarship, \$50.00—  
Herman Schwenk, Talbot.

The Imperial Oil Scholarship, \$50.00—Bruce Ing, Carstairs.

The student to be awarded the Canadian Legion Scholarship for the 1950-51 year had not yet been selected as at the close of the year 1950.

In addition to the foregoing scholarship awards, several prizes were presented, mainly to the second year students, to whom scholarships were not available except to proceed to the University.

## STAFF CHANGES DURING THE YEAR

Mrs. E. Nelson, who taught Home Management only for one year, submitted her resignation shortly after the close of the term in April, because of ill-health. The vacancy was filled before the opening of the fall term by the appointment of Miss K. O'Callaghan, a graduate of the University of Alberta.

D. R. Macpherson, instructor in Animal Husbandry, resigned during the summer to take over full time operation of his farm at Delia. This position was filled by the appointment of R. H. Cooper, a graduate of the University of Saskatchewan.

A new member was added to the staff in the person of George Hughes, a graduate of the University of Alberta. Mr. Hughes' duties are the supervision of physical education and some instructional work.

A. R. Hoefling resigned as Accountant during the summer, and Nelson Norton was appointed to the position.

## SUMMER PROGRAMS AND STAFF WORK

During the summer months when classes are not in session, the staff members were engaged in various duties connected with the School and with other Branches of the Department. A considerable amount of time was devoted by most of the staff to the preparation of detailed outlines of the various courses offered during the winter term.

M. W. Malyon was in charge of the grounds and gardens and assisted with the summer courses. Miss Caverhill did some work for the Women's Extension Service and was in charge of the dormitory during the summer courses and other conventions. F. C. Jorgenson assisted with the summer courses and in the Principal's office. H. J. Armstrong was attached to the Field Crops Branch in connection with pest control. W. C. Kirk assisted with and held several machinery field days. V. E. Molsberry helped at

the offices of two of the District Agriculturists for some time. H. W. Sutherland was with the Fur Farm Branch from July first. G. W. Carter devoted all of his time to the work of the Public Works Department. Misses McIntyre and Mosenon were attached to the Women's Extension Service most of the summer. Miss McKim transferred to the Department of Public Health and was stationed as a District Nurse at Worsley.

A total of twenty-seven field days, picnics, conventions and conferences was held between the time the School closed in April and re-opened in October. Total attendance was about 2,500.

Among these events were the following:

	Attendance
District Home Economists' Conference .....	15
Garden Club Leaders' Conference .....	40
Alberta Federation of Home and School Associations.....	250
Club Leaders' Conference .....	130
Farm Women's Week .....	80
Junior Club Week .....	160
W.L. Girls' Club .....	150
O.S.A. Alumni Association .....	150
Junior Club Eliminations .....	160

## BUILDINGS AND GROUNDS

Maintenance work on the school property was carried on under the direction of G. W. Carter.

The first and second floors of the boys' dormitory and the first floor of the girls' dormitory were completely renovated and decorated. The gymnasium and stage were completed. The dormitory building was connected with the central heating plant.

A start was made to connect the school buildings with the town of Olds sewerage system.

The finish coat of stucco was given to the Animal Husbandry Building and the Metalwork Shop.

Several of the rooms and halls of the main building were decorated.

A new floor of lino was laid in the Field Crops Laboratory and the Greenhouse was completed.

All of the farm buildings except the one swine barn and the poultry house were painted.

A new well was drilled at the south farm.

## OPENING OF THE 1950-51 TERM

The number of applications from girls was less than usual for the course in Home Economics. We do not know how to account for this situation. More applications were received from boys for the course in Agriculture than could be accepted. Those accepted for the course must have attained their seventeenth birthday before the opening date of the School. The average age of the first year class was 18.6.

Final registration was:

Year	Home	Economics	Agriculture
First .....	28	50	
Second .....	17	42	
Two-in-One .....	12	33	
Total .....	57		125

The staff for the 1950-51 term:

C. E. Yauch, B.Sc.—Principal.

V. E. Molsberry, B.Sc.—Field Husbandry.

R. H. Cooper, M.Sc.—Animal Husbandry.  
M. W. Maylon, B.S.A.—Dairying and Poultry.  
W. C. Kirk, B.Sc.—Farm Machinery and Motors.  
H. J. Armstrong—Metal Work.  
G. W. Carter—Building Construction and Farm Buildings.  
H. W. Sutherland, B.Sc.—Science.  
F. C. Jorgenson, English, Mathematics, Dean of Men's Residence.  
Miss F. C. McIntyre—Cooking and Nutrition.  
Miss Helen Moseson, B.H.Ec.—Sewing, Clothing and Textiles.  
Miss K. O'Callaghan, B.Sc.—Home Management.  
Miss G. R. Caverhill, B.Sc.—Dietitian, Dean of Women's Residence.  
Miss M. McKim, R.N.—Resident Nurse.  
G. Hughes, B.Sc.—Physical Education, Botany.  
Nelson Norton—Accountant.

## THE FARM

The grain crops got away to a good start in 1950, but a dry period which followed until July 1 reduced the crop greatly. The early sown crops headed out quite early and a second growth came on after the rains came in midsummer. The later seedlings turned out better, one 45 acre field of Eagle oats yielded 103 bushels per acre. The yields were quite variable from the different fields. The total crop threshed was 11,637 bushels of oats and 2,200 bushels of barley. Most of the seed grain for the farm is now grown on the plot area at the School.

Thirty-two tons of hay, twenty-five tons of greenfeed and fifty tons of silage were put up.

Pasture and hay crops were quite short but better than in 1949.

The precipitation in both 1949 and 1950 was about 4 inches below normal.

Forty acres were summerfallowed, 40 acres of grassland broken up and 68 acres seeded down to a forage mixture.

Four young Angus bulls—the remainder of the herd sent to Fairview—were on the farm during the year. They were used for class purposes and will probably be sold in the spring of 1951. The Shorthorn cattle stayed in good condition throughout the year.

The Holsteins did well but had to be fed a little extra because of the poor pastures. There was a good demand for all breeds of cattle. The hogs did very well during the year, with the demand increasing the latter part of the year. A boar and two gilts of the English white breed were added to the herd in November.

Sixteen head of feeder steers were bought in the fall to be used for class purposes and to supply beef for the dormitory.

A flock of about 200 white Leghorn chickens is kept, along with some miscellaneous breeds for class purposes. The eggs are sold to the dormitory.

There was very little demand for horses. Three foals were raised but no mares were bred.

At the south farm a good supply of water was struck by drilling a well in the northeastern part of the west quarter. The corrals were moved to the new well.

## VERMILION SCHOOL OF AGRICULTURE

### THE 1949-50 SCHOOL TERM

Enrolment at the end of the regular term was as follows:

	Agriculture	Home	Economics
First Year .....	54	31	
Second Year .....	37	16	
Two-in-One .....	27	13	
	118	60	

This total was 9 less than the 187 students who actually registered and began classes the previous fall. The reduction was due to withdrawals during the term, generally because of emergencies arising at the students' homes.

### GUEST SPEAKERS

Guest speakers who visited the School and addressed the students during the spring term included: Mr. M. Syrotuck, Production Services, Dominion Department of Agriculture; Dr. A. G. McCalla, Faculty of Agriculture, University of Alberta; Mr. G. W. Northfield and Mr. W. D. Sharpe, Dominion Government Income Tax Branch, Edmonton; and the following officials from the Provincial Department of Agriculture; B. J. Whitbread, W. H. T. Mead, A. M. Wilson, F. H. Newcombe, D. H. McCallum, A. J. Charnetski, and Miss Margaret Fraser.

### SPECIAL EVENTS

Special events featured during the spring term included:

February 2nd—Public Speaking Contest.

February 5th—Concert by Vermilion Male Voice Choir.

February 17th-19th—Visit by delegation of V.S.A. students to the Olds School of Agriculture.

March 4th—Dramatics Program.

March 10th—Spring Open Dance and Alumni Reunion.

March 11th—Visit by delegation of V.S.A. students to University of Alberta.

March 29th—Little Royal and Achievement Day.

April 5th—Graduation Exercises.

A new departure in the general set-up of the Little Royal and Achievement Day was adopted whereby displays of the work of various classes were arranged in the shops, laboratories and classrooms where they had been prepared. The visitors were invited to inspect these displays and incidentally to take the opportunity to visit those of the buildings and acquaint themselves quite fully with the facilities available to the students. None of the student work on display was judged except the live stock showmanship classes, for which Mr. Peter Wylie was guest judge. The event as a whole continued to enjoy popular support of the public, who attended in even larger numbers than in previous years.

### GRADUATION

At the graduation exercises held April 5th, the principal address was delivered by the Honourable D. A. Ure, Minister of Agriculture. Mr. O. S. Longman, the Deputy Minister, brought greetings from the De-

partment of Agriculture. The invocation was given by the Rev. W. N. Blackmore and Miss Marjorie West was soloist.

Diplomas of graduation were awarded as follows:

	Agriculture	Home Economics
Two Year Course .....	36	16
Two-in-One Course .....	27	13

## SCHOLARSHIPS

Winners of scholarships for achievement during the term were named as follows:

The Alberta Surplus Wheat Board Money Trust Scholarships (tenable at the University of Alberta, \$100.00 each)—

In Agriculture—Buckley Godwin, Sangudo; Kenneth Stewart, 11510 64th Street, Edmonton; Victor Melenka, Andrew.

In Home Economics—Cecile LaPlante, Vimy; Gertrude Byrtus, Athabasca.

The Alberta Surplus Wheat Board Money Trust Scholarships (tenable in Second Year, \$75.00)—

James Barr, Vermilion, Ruby Ray, Rochfort Bridge.

The Canadian Legion Scholarship, \$100.00—  
Gerald Ambrose, Lake Isle.

The United Grain Growers Scholarship, \$50.00 each—

Mary Chorzempa, Athabasca; George Austin, Ranfurly; Norman Lyseng, Camrose.

The V.S.A. Alumni Scholarships, \$50.00 each—

Dan Giebelhaus, Vegreville; Marie Scheidegger, Ohaton.

The Vermilion Board of Trade Scholarship, \$50.00—  
Ronnie Goeglein, Tofield.

The Alberta Seed Growers' Scholarship, \$50.00—  
Kenneth Weise, Pibroch.

The Craig Brothers Scholarship, \$50.00—  
Roy Galloway, Fort Saskatchewan.

The Alberta Women's Institutes Scholarship, \$50.00—  
Anne Hlina, Notch Hill, British Columbia.

The Robert Gardiner Memorial Scholarship, \$50.00—  
Sonia Onyschuk, Tofield.

The Alberta Turkey Breeders' Scholarship, \$50.00—  
Charles Wallish, South Edmonton.

In addition to the scholarships described above, prizes donated by various organizations and business firms to a value in excess of \$500.00 were awarded to students who gained distinction for achievement in various branches of classroom activity.

Winners of the staff medals were: Victor Aalhus, Baldonnel, British Columbia; Kenneth Stewart, Edmonton; Margaret Alton, Fort Saskatchewan; Cecile La Plante, Vimy.

An active program of a wide variety of extra-curricular activities was again organized under the Students' Council and supervised by members of the instruction staff.

The "Snack-Bar" arrangement begun the previous term continued to be operated by the students and attracted business amounting to \$2,300.00 for the period November 15th to March 15th.

### THE SUMMER PROGRAM

The series of short courses held during the month of July was the principal feature of the summer program. These courses, similar to those held in recent years, were as follows:

- July 4th to 8th—Alumni Short Course and Reunion.
- July 10th to 15th—Junior Farm Club Week.
- July 17th to 21st—Farm Women's Week.
- July 24th to 29th—Boys' and Girls' Short Course and Fair Camp.

The School of Agriculture continues to serve numerous organizations throughout a wide area and particularly during the summer months its buildings and grounds provide excellent facilities for meetings, conferences and field days. The following are some of the principal events held in 1950:

- Vermilion Horticultural Society Annual Meeting.
- Credit Union Annual Meeting.
- Provincial Fire Chiefs' Annual Convention.
- District Weed Inspectors' Conference.
- Vegreville, Vermilion and Wainwright Districts' Joint Teachers' Convention.
- Agricultural Service Boards Joint Conference.

Junior Farm Club organizations, in particular, have centred many of their activities at the School of Agriculture. During 1950 events of special interest included the Little Royal, the summer short course program and field days related to crop improvement and live stock work. Clubs participating in such activities at the School were those supervised by District Agriculturists located at Vermilion, Wainwright, Vegreville, Willingdon and St. Paul.

### EMPLOYMENT OF STAFF DURING SUMMER MONTHS

In addition to the responsibilities associated with the summer short courses and the special events described above, members of the teaching staff engaged in various activities connected with the School or with other Branches of the Department. Eight of the men and three of the ladies were available for this work.

J. L. Kerns, Instructor in Animal Husbandry, carried on supervision of the School Farm, and J. E. Hawker, Instructor in Horticulture, continued in charge of the maintenance of the grounds, gardens and field crop plots, but both men devoted considerable time to assisting with programs throughout the area where their respective special training and experience were employed in junior club activities, farmers' meetings and agricultural fairs.

S. C. Acheson, Instructor in Farm Mechanics, assisted the Extension Service in conducting a series of farm machinery field days over a wide area of the Province during May, June and September. The services of D. C. Folk were employed on a number of occasions leading and giving

demonstrations on community singing. When not engaged in these projects both men devoted their time to installing and fitting classrooms with special features and facilities.

Miss Lila Engberg, Miss E. M. Curran and Miss Anne Puchalik were employed by the Women's Extension Service.

Mr. R. H. Harvey was employed by the Field Crops Branch as fieldman, Mr. E. V. Hamula did creamery inspection work for the Dairy Branch and Mr. S. Pettem was Assistant District Agriculturist at Vermilion.

## BUILDINGS AND GROUNDS

Principal projects conducted by the Buildings Branch in 1950 were as follows:

Repair of plaster and redecoration of the interior walls throughout a considerable part of the dormitory building;

Repairing and painting water tower and fire escapes;

Installation of a 12-stall automobile garage in which approximately one-half of remaining army hut at the eastern edge of the campus was used;

Fitting of a Maintenance Shop out of the remaining part of the army hut referred to above;

Some redecoration in two staff residences;

The laying of some 30 sq. yards of cement flooring in various farm buildings;

Installation of two Texas gates along connecting road on School Farm;

The addition of some 500 yards of gravel to roadways and farm yards;

A considerable number of minor classroom fittings and repairs.

The general appearance of the grounds, attractive displays of flowers and shrubs, and the demonstration material in the field crop plots, attracted a considerable number of visitors and provided useful illustrative material for field days, short courses and other organized projects.

## SCHOOL FARM

The extremely dry weather experienced during the previous two seasons continued in 1950, with the result that yields of grains and forage crops were seriously reduced. Approximately 2,500 bushels of oats and 35 tons of hay had to be purchased as feed for the maintenance of the farm live stock program.

Farm sales to the School dormitory during 1950 were as follows:

Milk and cream .....	\$2,928.04
Eggs .....	446.28
Meat .....	4,490.23
Total.....	\$7,859.55

Total farm sales during the year amounted to \$16,654.71.

## 1950-51 TERM

Registration for the regular 1950-51 term opened on October 24th. Enrolment was as follows:

	Agriculture	Home Economics
First Year .....	61	27
Second Year .....	40	19
Two-in-One .....	24	14

All fully qualified applicants to these classes were admitted except for the First Year Course in Agriculture, for which about 25 applications had to be refused because of the limited accommodation available. All applications refused were from applicants under 17 years of age.

A point of interest respecting the timetabling of classes arises out of the fact that the double length laboratory periods in metal work and carpentry adopted in the 1947-48 term proved so satisfactory, that the principle was enlarged upon and applied to cooking and sewing laboratory periods. Thus, the three quite separate and distinct  $1\frac{1}{2}$ -hour periods in each of these subjects have now been replaced by one 3-hour period and one  $1\frac{1}{2}$ -hour period. This arrangement is popular with both students and instructors because they report that they lose a smaller percentage of time getting their work started and cleaning up at the end of classes.

Visitors and guest speakers who inspected the School and met the students during the fall term included: Mr. A. E. Palmer, Superintendent, Dominion Experimental Farm, Lethbridge; Mr. H. R. Long, Managing Editor, Lethbridge Herald; Mr. A. E. Bridges, Provincial Fire Commissioner; representatives of the Camrose School Division, Principal's Association; and Mr. B. K. Sandwell, Editor of the Toronto Saturday Night.

The School has enjoyed fine support from numerous business firms and organizations who have donated a very considerable quantity of material and equipment for teaching and demonstration purposes. Particular reference in this regard is made to manufacturers and distributors of farm and home equipment, without which our work in farm mechanics and in home management would be considerably handicapped.

Instruction and administrative staff was as follows:

N. N. Bentley, B.A., B.Sc.—Principal, Instructor, Farm Management.  
J. L. Kerns, B.Sc.—Instructor in Animal Husbandry, and Farm Manager.  
J. E. Hawker, B.A., B.Sc.—Instructor in Botany and Horticulture.  
S. C. Acheson, B.S.A.—Instructor of Motors and Machinery.  
L. Blades—Instructor in English, Community Organization, Economics and Entomology.  
D. C. Folk—Instructor in Farm Building and Home Mechanics.  
R. A. Harvey, B.Sc.—Instructor in General Science.  
E. V. Hamula, B.Sc.—Instructor in Dairying and Poultry.  
J. T. Lancaster, B.Sc.—Instructor in Field Husbandry.  
S. W. Pettem, B.Sc.—Instructor in Metalwork and Mathematics.  
C. J. Mahaffey—Dean of Men's Residence and Instructor in Physical Training.  
Miss L. M. Graham, R.N.—Instructor in Home Nursing, School Nurse and Dean of Women's Residence.  
Miss E. M. Curran, B.Sc.—Instructress in Home Management, Laundering and Handicrafts.  
Miss S. Shemansky, B.Sc.—Instructress in Sewing and Clothing.  
Miss Lila Engberg, B.Sc.—Instructress in Nutrition and Cooking.  
Miss Anne Puchalik, B.Sc.—Dietitian and Instructress in Mathematics.  
J. R. Roxburgh—Accountant.  
Mrs. K. I. Bell—Stenographer.  
Miss I. McCormick—Librarian.

Mr. D. R. Fraser, Fur Farm Supervisor for the Alberta Department of Agriculture, and Dr. J. G. O'Donoghue, Extention Veterinarian, provided some lectures in their respective subjects to the graduating students in Agriculture.

## REPORT OF JUNIOR ACTIVITIES AND YOUTH TRAINING REPORT OF DEPUTY MINISTER

G. S. Black, Supervisor, Junior Activities and Youth Training.

Margaret K. Frasér, Supervisor, Girls' Club Work.

C. L. Usher, Assistant Supervisor, Junior Activities.

### GENERAL

A most successful year can be reported in junior activities; membership has increased and in particular the scope of club work expanded. Where club work formerly consisted of regular meetings and the achievement day, it now includes secondary projects such as short courses, rallies, summer camps and visits to Agricultural Schools or Experimental Farms. In 1950 attendance at 1,663 gatherings of junior clubs totalled 38,852.

Club Leaders' Conferences were again held, with increased attendance and interest being shown. Junior Club Week at both Vermilion and Olds was well attended and successfully concluded. The interchange of club members between the 4-H Clubs of Montana and the Junior Clubs of Alberta again took place. Summer camps were well attended and short courses and rallies have increased in number and size.

Alberta clubs again had a very successful year in the National Contests held by the Canadian Council on Boys' and Girls' Club Work. For the second year in succession two girls' teams from this Province won national championships while other teams stood second in beef, third in grain and sixth in dairying. For the first time in the history of the Toronto Royal, the World's Championship in Wheat was won by a member of an Alberta Junior Club. In the junior grain section, Alberta club members took thirty-two of the thirty-five awards in the wheat section, first, second and third in late oats, and first, fifth and sixth in early oats.

Miss Lila Engberg assisted Miss M. Fraser in girls' club activities and several other members of the Schools of Agriculture staff were used part time in the club program. These included Messrs. Folk, Pettem and Molsberry.

The following is an analysis of each project:

**ALBERTA'S JUNIOR CLUBS, 1950**

	No. of Clubs	Membership
Beef .....	83	1,415
Dairy .....	26	502
Swine .....	2	22
Poultry .....	2	26
Wheat .....	66	1,276
Oats .....	29	438
Barley .....	20	327
Forage .....	16	198
Potato .....	1	13
Clothing .....	72	936
Gardening .....	47	544
Foods .....	16	221
Home Decoration .....	4	46
Total.....	384	5,959

### LEADERS' COURSES

Two leaders' courses were held. Thirty-one leaders of Garden Club projects attended a course in April prior to the start of their work. Leaders in other projects attended a course held at the Olds School of Agriculture early in July at which one hundred and fifteen were present. This course

continues to grow and increased interest is being shown. Discussion groups form a major part of the program. Credit is given to the various sponsors for their financial aid in holding such courses.

### JUNIOR CLUB WEEK

In 1950 183 members of Farm Clubs and 131 members of Home Clubs attended Junior Club Week at the Schools of Agriculture at Olds and Vermilion. Club members who attended this event are the efficiency winners from their individual clubs. They enjoy a week of recreation and instruction as a reward for their club work. At the conclusion of each Junior Club Week six scholarships are awarded. These are provided from the Surplus Wheat Board Monies Trust and are tenable at a School of Agriculture. Scholarship winners were:

#### Olds

Home Economics—Opal Keller, Cayley;  
Margaret Hartman, Ohaton.

Grain—Ronald Cole, Clive; Milton Waddle, Vauxhall.

Live Stock—David Kenney, Redland; Harry Echlin, Olds.

#### Vermilion

Home Economics—Joyce McCrimmon, Bon Accord;  
Alice Rollof, Edmonton.

Grain—Gustav Stemp, Wembley; Gordon Miller, Vegreville.

Live Stock—Marshall Eleniak, Tofield; Gordon Haines, Viking.

### INTERNATIONAL TRIPS

For the fourth consecutive year two boys and two girls were selected to represent Alberta Junior Clubs at the 4-H Club Congress at Bozeman, Montana. This international visit is returned by 4-H Club representatives attending Junior Club Week at either Olds or Vermilion. Alberta members are selected on the basis of their achievements in club work, age, personality and speaking ability. They were:

Yvonne Peterson, Ohaton.  
Joan Lailey, Mirror.  
Gerald Cole, Clive.  
Harold Schielke, Carstairs.

The Alberta delegates were accompanied by Leslie Usher, Assistant Club Supervisor, and Miss Ruth Murray, District Home Economist, Wetaskiwin. This interchange of delegates makes for much better understanding and a wider knowledge and interest in club work and should do much to enrich and widen the scope of junior club work in both Alberta and Montana.

### JUDGING COMPETITIONS

Provincial judging contests were held at the Olds School of Agriculture on July 31st, August 1st and 2nd. Winning teams were selected to represent Alberta in the National Contests conducted by the Canadian Council on Boys' and Girls' Club Work at the Royal Winter Fair. A larger number of contestants was present than at previous contests. Under the present arrangement, one team in each project may be entered by each District Agriculturist and District Home Economist. Two days are

required for the holding of these final contests in the five projects. The following teams were selected.

Clothing—Opal Keller and Norma Stephenson, Cayley.

Food—Betty Brown and Helen Wagner, Nanton.

Grain—Harlan and Kenneth Waddle, Vauxhall.

Beef—Roy Vold and Bud Butterfield, Ponoka.

Dairy—Harry and June Echlin, Olds.

Club teams standing in second place were rewarded by a trip to Club Week at one of the Schools of Agriculture next summer, and were as follows:

Clothing—Audry Toutant and Jean Syrnyk, Hines Creek.

Food—Dona Morkerburg and Marjorie Johannson, Markerville.

Grain Don Johnstone and Herman Schwenk, Talbot.

Beef—Howard Brown and Lawrence Kallal, Tofield.

Dairy—Bonnie and Johnny Shepherd, Erskine.

## NATIONAL JUDGING COMPETITIONS

One hundred and sixteen members in nine projects representing nine Provinces entered the National Contests of the Canadian Council on Boys' and Girls' Club Work at this year's Toronto Royal. Alberta again made a good showing, having two firsts, a second, a third and a sixth. The following are the placings of our teams:

Clothing—First: Opal Keller and Norma Stephenson Cayley.

Food—First: Betty Brown and Helen Wagner, Nanton.

Beef—Second: Roy Vold and Bud Butterfield, Ponoka.

Grain—Third: Harlan and Kenneth Waddle, Vauxhall.

Dairy—Sixth: Harry and June Echlin, Olds.

High individual honors were won by:

Opal Keller of the Cayley Clothing Club and Betty Brown of the Nanton Food Club.

Harry Echlin of the Olds Dairy Calf Club stood second.

## CAMPS, RALLIES AND SHORT COURSES

Camps, rallies and short courses are becoming more important phases of the club program. In 1950 8,467 young people attended some form of these activities. These events feature general education in agriculture and home economics and recreation. Examples of these activities are Boys' and Girls' Camps at Class "A" and "B" Fairs, Camps at summer resorts, trips to places of interest, one-week short courses and a one-day club rally. The fair camps receive financial assistance from the Federal Department of Agriculture and the program at them is directed by a committee representing the Federal Department of Agriculture, the Alberta Department of Agriculture and the Fair Board. A number of commercial and service organizations give valuable assistance in the form of prizes and scholarships.

## TILLER MATCH JUDGING COMPETITION

Something new was added this year when the Edmonton and District Agricultural Society sponsored a Tilling and Plowing Match in June. This had as a feature a Boys' Tiller Judging Competition, which was supervised

by this Branch. The fifteen contestants entered paved the way for similar competitions on a larger scale another year.

## RADIO

A fifteen minute club program is given monthly over CKUA on the "Farm and Home" broadcast. Subjects of interest to all club members are broadcast and although no definite knowledge of the number of listeners is available, it has become a looked for event in many homes. In addition, the Canadian Broadcasting Corporation has generously allotted fifteen minutes of their farm broadcast each week to junior club work.

## JUNIOR CLUB UNIFORMS

At the request of club members and leaders a uniform has been adopted for the Farm and Home Clubs. These uniforms are worn by members attending Club Weeks, on out-of-the-Province trips, at competitions and other club get-togethers.

The girl's uniform is a two-piece dress of maroon colored alpine cloth with a white cotton dickie or blouse. A shoulder bag of matching material carries the Junior Club crest. For dress wear the uniform is completed with a white felt beret and white gloves.

The boys wear a maroon shirt, maroon sweater, grey flannel trousers and grey gabardine tie.

Club uniforms are proving very popular with the members. Leaders and members of the Department staff are also encouraged to wear these uniforms for club events.

## JUNIOR CLUB BULLETIN

A club magazine is being issued quarterly and forwarded to each club member. This magazine has met with a grand response and is doing much to keep club members informed of club activities in Alberta. It is proving a splendid medium of keeping clubs posted on junior activities and is developing genuine enthusiasm in reporting events throughout the Province.

ALBERTA JUNIOR CLUBS  
(1940 to 1950 inclusive)

Project	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Swine .....	30	22	21	13	12	7	1	3	2	1	2
Beef .....	26	27	38	37	42	47	56	73	88	81	.83
Dairy .....	12	9	10	10	11	15	14	18	25	25	26
Poultry .....	—	—	6	8	—	—	2	3	1	1	2
Wheat .....	78	54	40	23	19	21	34	42	38	50	66
Oats .....	18	21	22	30	26	19	24	17	22	26	29
Barley .....	8	8	33	30	26	15	16	26	28	22	20
Potato .....	1	2	—	3	3	2	8	2	—	1	1
Forage .....	—	—	—	13	19	14	10	15	13	11	16
Garden .....	5	10	8	8	11	20	27	30	37	39	47
Clothing .....	2	25	55	41	44	60	61	52	71	74	72
Foods .....	—	—	5	2	1	2	3	4	2	8	16
Home Decoration ....	—	—	—	—	11	5	2	4	—	4	4

## AGRICULTURAL PROJECTS

### BEEF CALF CLUBS

A slight increase was noted in the number of Beef Calf Clubs and in the quality of the calves exhibited. Prices continued to remain high and averaged from two to three cents above market quotations. Members

continue receiving prepared lessons on feeding, care and management plus personal visits from District Agriculturists. The interest in this project remains very high.

Progress was made in the maintaining of a uniform standard of judging. Improvement is noted in the quality of calves as the percentage in the lower brackets diminishes. Messrs. Noad, Coles, Mead and the late J. Johnston were responsible for most of the judging, and J. Kerns and H. Fulcher of the Department of Agriculture also assisted in this work.

Achievement days in many localities have become a major event; capacity crowds attend and the interest is very keen. Members dressed in their club uniforms and utilizing club banners are making very attractive displays.

### DAIRY CALF CLUBS

Each year a few new clubs are organized and thus slowly the interest in Junior Dairy Calf Clubs is spreading. A limited supply of dairy calves continues to be the determining factor in the number of new clubs which can be organized. Although this type of project lacks the glamour of the annual auction sale in Beef Calf Clubs, it is doing good work and has much to merit it in the fact that it helps the members learn the fundamentals of club work and establish them in good breeding stock.

For the fourth consecutive year a Provincial Junior Dairy Show has been held in conjunction with the Red Deer Exhibition. The Alberta Dairymen's Association again assisted by paying a portion of the cost of transporting the entries to the fair. The first prize calf and yearling at each achievement fair is eligible to enter the Provincial Show. This event has become one of the outstanding attractions and over 500 people watched the display put on by the club members. Robert Clarke of Didsbury and Miss G. Richards of Red Deer won in the calf and yearling sections respectively and were presented with trophies by the Minister of Agriculture, Honourable D. A. Ure.

Two other events in which Junior Dairy Calf Club members are particularly interested are the Alberta's Dairymen's award to attend their convention as guests of this organization and the donating by the Kiwanis Society of South Edmonton of a plaque to be awarded to the most efficient Junior Dairy Calf Club.

### POULTRY CLUBS

Following the formation of a turkey club in Vermilion last year, Marwayne has duplicated this event and held its first achievement day and sale this fall. The improvement in quality and finish of the birds displayed at Vermilion is worthy of comment. Qualified persons expressed the opinion that this was the best exhibition of dressed poultry ever held within the Province. Average price received was sixty-five cents per pound, with top awards going to one dollar and thirty-five cents per pound—a provincial record for dressed fowl.

### SWINE CLUBS

Swine clubs remain at an all-time low. It seems to be impossible to arouse sufficient interest to increase the number of Swine Clubs. Although in many districts large numbers of swine are raised, it continues to be impossible to secure sufficient members to organize additional clubs in this project.

## CROP CLUBS

Junior Crop Clubs again increased in numbers and despite the adverse weather had a very successful year.

The Provincial Plot Competition has become a very important event with considerably more enthusiasm and interest being shown in each of the projects as a result of it. In this competition each District Agriculturist selected the winning plot in each project in his area and these were then judged by Mr. L. Usher of this Branch. The final awards were as follows:

Wheat—Howard Roppel, Rockyford.

Oats—John Nowakowski, Clandonald

Barley—Andrew Woitas, Bruderheim.

Suitable presentations will be made to the successful contestants by the Department and sponsors during the winter months.

Joint achievement days of two to six grain clubs were held at Drumheller, Carbon, Three Hills, Berwyn, Carstairs, Spirit River, Schuler, High Prairie and Edmonton, rather than individual shows. This departure from the time honored single club method has much to merit it and much greater interest is being shown by the communities involved.

Seed distributed to both organized and newly formed clubs was as follows: 3,176 bushels of wheat, 1,842 bushels of oats, 1,916 bushels of barley and 2,538 pounds of forage seed.

The Junior Provincial Seed Fair was held again at Calgary late in January. This continues to be a major attraction judging by the comments heard. Senior students from both Schools of Agriculture assisted in placing the awards in the junior classes.

## ROYAL WINTER FAIR

Ricky Sharpe of the Munson Junior Wheat Club won first in the Junior Section of Spring Wheat, and went on to win the World's Wheat Championship for the first time in history. Howard Roppel of the Rockyford Club won the Reserve Championship.

Alberta Junior Club exhibitors won all awards except 12th, 29th and 30th in Spring Wheat; 1st, 2nd and 3rd in the Late Oat class; and 1st, 5th and 6th in the Early Oats.

## HOME ECONOMICS PROJECTS

The girls' club program is again providing instruction in homemaking to a large number of girls living in rural areas of Alberta. There were 139 girls' clubs completing projects in 1950 with a membership of 1,747.

The interest in this work is increasing each year and the standard of work is improving. This year many of the club leaders and assistant leaders are former club members and some are graduates of one of the Schools of Agriculture.

## PROJECTS

Eleven projects have been outlined covering the fields of Clothing, Foods, Gardening, Home Decorating and Etiquette. Lesson material has been prepared on each project and assembled into a "Project Book". Each club member receives one of these lesson books. Manuals of instruction and information are provided to all club leaders.

The Clothing projects are still proving very popular with the girls. 92 clubs have completed clothing projects this year. Besides the instructions available from the project books, 158 lessons and demonstrations in clothing were given to the clubs by the District Home Economists and other staff members. The teams entered in the Provincial Judging Competitions represented a cross-section of these clubs and showed a high standard of work in clothing.

The Garden projects are sponsored jointly by the Alberta Wheat Pool and this Department. 47 clubs completed projects this year and in most cases the quality of work had improved. The high number of clubs successfully completing projects seemed to be a result of the instruction received at the Leaders' Course held in April to start the clubs off properly.

All the garden plots were judged by the District Home Economists and in most clubs tours were arranged so all members could enter into this activity. This proved helpful in interesting the parents in the work and in gaining community support.

Seeds or shrubs were distributed to all club members in the Gardening projects. These were supplied by the Alberta Wheat Pool. An attempt is made to introduce the members to new varieties and to varieties suited to their location.

The assistance given in this work by the Alberta Wheat Pool fieldmen is greatly appreciated.

Projects in Home Decoration and in Etiquette are also available to clubs and are gaining in popularity. All clubs in operation at the present time have covered the Etiquette project.

A great deal of help in preparing and carrying out the Foods and Home Decoration projects was received from the Nutrition Specialist and Home Designing Specialist.

## AWARDS

The Alberta Wheat Pool awarded 47 prizes for the best garden plots in each club and presented 14 clubs with awards for obtaining the highest standing in each Home Economist's district.

The T. Eaton Company awarded prizes to the member of each club carrying a Food, Clothing or Home Decorating project who placed highest on the basis of project work and club work. Seventy awards were made in Clothing and Home Decorating projects and sixteen in Foods projects.

The Alberta Wheat Pool Scholarship to the value of \$150.00 to a member of a Garden Club enrolling in the first year Home Economics at the University of Alberta was awarded to Miss Cecile LaPlante of Vimy.

## OTHER ACTIVITIES

A three-day sewing course was offered to leaders of clubs carrying clothing projects. Thirty-five leaders attended. They are finding that it was well worthwhile and helpful in their club work. It is hoped that this short course may be repeated each summer.

This year 107 former club members were given direct assistance in homemaking and vocational problems.

The aim of the Girls' Club Program is to encourage rural girls to adopt up-to-date methods in homemaking, to interest them in improving their standards of work and to encourage them to take part in community activities. Displays at achievement days and reports of the District Home Economists indicate a definite improvement in the standard of work of the club members. It is hoped that in the coming year more clubs may be encouraged to take an active and constructive interest in their communities.

## ANNUAL REPORT 1950

PROVINCIAL HORTICULTURAL STATION,  
BROOKS, ALBERTA

P. D. HARGRAVE, Superintendent

During the past season the objectives of the Horticultural Station have been revised in order that they might be more specifically related to the production of ornamental trees for farm shelter-belts, field and roadside plantings.

The production of new fruit varieties, the testing of introduced varieties and the propagation of those suitable for Alberta conditions will be continued but this phase of horticultural development may have to be curtailed until the program of multiplying trees for farm planting gets safely under way. Vegetable work and the testing and multiplying of new ornamentals will be continued.

The headquarter site situated immediately west and adjacent to the town of Brooks was exchanged by the Irrigation District for 234 acres of irrigable land two miles east of Brooks. A portion of the headquarter area was sub-divided into 73 lots which are now available for purchase for residential use within the town.

The work involved in removal of plant material from the headquarter site increased Station operation costs and reduced the program on other projects.

The production of trees, shrubs and fruit stocks suitable for distribution to farmers of the Province was undertaken on a greatly increased scale. During the past year 60,000 cuttings were distributed, 30,000 seedling trees and shrubs were lined out and 283 lbs. of tree seeds planted. Approximately 10,000 trees and shrubs were distributed for farm planting. A large number of seedling shrubs and some trees were dug by the personnel of the Defence Research Station for windbreak purposes from that section of the Nursery which was sub-divided.

Investigations were continued in fruit improvement through hybridization, the increase of open pollinated seed stocks and the propagation and testing of new varieties.

Five new demonstration orchards and nine farm orchards were established during the past season. Vegetable testing was closely associated with frozen food processing. Hop production, forestry, fertilizer trials and sprinkler irrigation are projects being continued for further testing.

In the operation of the Station 40% of the expenditures were for casual labor employed for only the summer months. Administration required 15% of the appropriation and student assistants, who carried out the technical portion of the program received 5%. In as much as labor and administration costs amount to 60% of the appropriation the increase in hourly wage rates directly affect operating costs. Of the balance 10% was used for heat, light and power. Equipment and water for irrigation accounted for 12%. The remainder was paid for expenses incurred in the operation of tractors, trucks, cars and in travelling expenses.

The full-time staff comprised the superintendent, plant propagator, vegetable specialist, food processor, foreman and stenographer. Casual labor consisted of one permanent farm labourer and from 5 to 14 seasonal

employees. During the summer months 5 student assistants from the Schools of Agriculture and the University aided with the technical work.

Members of the Staff took part in 14 Short Courses, 31 Horticultural Meetings and 8 Horticultural Shows. The Dominion Department of Agriculture provided a vegetable specialist to work on the production of vegetable seeds of registerable varieties under direction of the Superintendent.

Much of the well known beautification at the headquarters of the Station, which had made it popular throughout Alberta and adjoining Prairie Provinces is in the process of being abandoned to form part of the sub-divisions of the town of Brooks. The fact that this area has been exchanged for a considerable increased acreage of farm land on which to re-establish plant material has created difficulties and disorganized work of the Station. Until the new program has been launched successfully the development of some projects will necessarily be curtailed.

## REPORT OF RELIEF SETTLEMENT BRANCH

E. B. SWINDELEHURST, Acting Supervisor

To assist in settlement on the land of selected families who would otherwise be in receipt of direct relief, placements under the Relief Settlement Plan were conducted from 1932 to 1941. During this period 1,092 families moved to farms selected by them and approved by the settlement board, and amounts varying between \$600.00 and \$1,000.00 per family were provided with Dominion, Provincial, and Municipal Governments participating.

With steadily increasing employment, 334 of these families obtained other work and abandoned their holdings. In addition, 352 families left the land for a variety of reasons including inability to adapt themselves to their changed environment. Salvage receipts from stock and equipment returned in these cases amounted to \$88,142.14.

Of those families who became established on the land, 295 have completed payment of the recoverable portion of assistance provided, and partial payments have been made by 49 others. Total receipts from this source were \$91,864.51.

Assistance under the Relief Settlement Plan, although limited in extent, fulfilled its original purpose of establishing many who were otherwise unable to earn sufficient for the support of their families. It provided opportunity for an independent livelihood and offered new hope to those who, as a result of adverse economic conditions, had no other than the depressing alternative of direct relief.

REPORT OF THE BOARD OF TRUSTEES OF THE SURPLUS  
WHEAT BOARD MONEY RECEIVED BY THE GOVERNMENT  
OF THE PROVINCE OF ALBERTA FROM 1916-1919  
CANADIAN WHEAT BOARD

Members: The Honourable D. A. Ure, Chairman.

Richard Ballhorn, Farmer, Wetaskiwin.

Arthur Pierson, Vice-President and Treasurer of the  
Independent Grain Company, Calgary.

I have the honour to submit the report for the year ending December 31st, 1950.

A statement showing the receipts and expenditures is attached, together with a statement of Assets and Liabilities.

During the year the receipts were \$91,027.56 as compared with \$5,689.08 for the previous year.

Payments for the year under review amounted to \$92,057.13 as compared with \$5,755.58 during the year 1949. Of this total of \$92,057.13, a sum of \$89,905.43 was invested in debentures as detailed below under "Investments," whereas during the previous twelve months \$4,016.08 was invested in City of Calgary 3½% debentures.

**INVESTMENTS:**

During the year, at June 1st, all the Province of Alberta debentures held by the Trust were called and redeemed due to a further re-financing program by the Government of the Province and these redemptions account for the large increase in receipts referred to above.

The proceeds were invested in New Brunswick 3½% debentures and British Columbia 3% debentures.

On September 1st last the \$15,000.00 Province of Alberta 2½% Savings Certificates became due and redeemable and the proceeds were also invested in the New Brunswick 3½% and British Columbia 3% bonds, as indicated on the attached Balance Sheet.

I might state that the reason the Board decided on the investments referred to in the preceding paragraphs rather than in the new Province of Alberta issue was due to the fact that the Alberta bonds would have had to be paid for in American funds which would have considerably reduced the net yield owing to the rate of exchange existing between the two countries at that date.

The investments at December 31st, 1950 as shown in the attached balance sheet, consist of New Brunswick 3½% debentures \$45,000.00; British Columbia 3% debentures \$45,000.00; and City of Calgary 3½% debentures \$4,000.00.

**MEETINGS**

A meeting of the members of the Board was held on June 12th last at which time the schedule of scholarships was modified to meet changing conditions. A copy of the schedule marked "Exhibit A", is attached hereto. It is proposed to add further scholarships when the new

## DEPARTMENT OF AGRICULTURE

**GENERAL:**

Since the Board instituted the policy of providing scholarships a total of 241 scholarships have been paid, representing an expenditure of \$20,041.56.

The members of the board have continued to follow the policy of conserving the Principal remaining in the Trust Fund by providing for expenditures from Income only, which, as pointed out in my last report, was adopted when we emerged from the depression years.

Respectfully submitted on behalf of the Board of Trustees.

Chairman.

**EXHIBIT "A"****SURPLUS WHEAT BOARD MONEY TRUST**

Schedule of Scholarships approved at Meeting of the Board  
held Monday, June 12th, 1950

From Clubs to Schools of Agriculture at each Club Week:	12	at \$ 75.00.....	\$ 900.00
2 crops			
2 livestock			
2 home			
From Schools to University at each School in Agriculture or Home Economics.....	2	at 100.00.....	200.00
To any young person to attend School of Agriculture .....	8	at 75.00.....	600.00
To Schools of Agriculture from Farm Young Peoples' Week at University, one boy and one girl	2	at 75.00.....	150.00
To School of Agriculture from Women's Institute Girls' Club Week at Olds .....	1	at 75.00.....	75.00
			<u>\$1,925.00</u>

NOTE: This schedule will be increased when School at Fairview is operating.

**TREASURY DEPARTMENT**  
**WHEAT BOARD MONIES TRUST FUND**  
**BALANCE SHEET AS AT DECEMBER 31, 1950**

**ASSETS**

INVESTMENTS:	Par Value	Bond Value
Province of New Brunswick 3 1/2% due April 1, 1967.....	\$45,000.00	\$44,781.62
Province of British Columbia, 3% due Dec. 15, 1969.....	45,000.00	44,561.54
City of Calgary, 3 1/2% due July 1, 1968.....	4,000.00	3,990.52
	<u>\$94,000.00</u>	<u>\$93,333.68</u>
Cash in Bank .....		1,425.45
Accrued Interest .....		525.00
		<u>\$95,284.13</u>

**LIABILITIES**

Trust Fund, December 31, 1949.....	\$90,807.98
Add: Surplus for year 1950 .....	4,476.15
Trust Fund, December 31, 1950.....	<u>\$95,284.13</u>

## TREASURY DEPARTMENT

## WHEAT BOARD MONIES TRUST FUND

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR  
ENDED DECEMBER 31, 1950

Bank Balance December 31, 1949 .....	\$	2,455.02
Interest on \$66,000 Prov. of Alberta Debentures.....	1,155.00	
Interest on 45,000 Prov. of N.B. Debentures .....	787.50	
Interest on 45,000 Prov. of B.C. Debentures .....	675.00	
Interest on 4,000 City of Calgary .....	140.00	
Interest on 15,000 Prov. of Alta. Savings Certificates...	375.00	
Interest on Bank Balances .....	60.69	
Interest Receivable—Special Adjustment		
Coupons due June 1, 1950 .....	1,528.27	
Redemption June 1, 1950 Spec. Adj. Coupons Purchased	1,406.10	
Redemption \$66,000 Prov. of Alberta Debentures called June 1, 1950 .....	66,000.00	
Redemption of \$15,000 Province of Alberta Savings Certificates .....	15,000.00	
U.S. Premium 10% on \$39,000 Province of Alberta Debentures called June 1, 1950.....	3,900.00	91,027.56
		\$93,482.58
 Deduct: Payments		
University of Alberta Scholarships .....	\$ 800.00	
Vermilion School and Farm .....	600.00	
Olds School and Farm .....	600.00	
P. W. Johnson—Honorarium .....	100.00	
Arthur Pierson—Meeting expense .....	20.00	
Richard Ballhorn—Meeting expense .....	10.00	
Alberta Government Telephones .....	1.70	
Prov. of N.B. registration fees for Debs.....	19.00	
Prov. of B.C. registration fees for Debs.....	1.00	
 Investments: \$45,000 Prov. of B.C. 3% Debentures due Dec. 15, 1969 at \$99.00 .....	44,550.00	
\$45,000 Prov. of N.B. 3½% Debentures due April 1, 1967 at \$99.50 .....	44,775.00	
 Accrued Interest Purchased .....	580.47	92,057.13
 Bank Balance, December 31, 1950 .....		\$ 1,425.45

## TREASURY DEPARTMENT

## WHEAT BOARD MONIES TRUST FUND

## ACCRUED INTEREST AS AT DECEMBER 31, 1950

<b>Province of New Brunswick Debentures:</b> \$45,000.00—3½% April 1, 1967 .....	3 months	\$ 393.75
<b>Province of British Columbia Debentures:</b> \$45,000.00—3% December 15, 1969 .....	½ month	56.25
<b>City of Calgary Debenture:</b> \$ 4,000.00—3½% July 1, 1868 .....	6 months	70.00
<b>Bank Balance</b> \$ 750.45 .....		.47
		\$ 520.47
 Add: Accum. of Discount:		
Accrued on Province of New Brunswick Debentures .....		3.31
Accrued on Province of British Columbia Debentures .....		.96
Accrued on City of Calgary Debentures .....		.23
 Net Earnings accrued to December 31, 1950.....		\$ 525.00













